

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: dr.electron@juno.com (Richard L Paton)  
Subject: Re: "engineer-bashing"  
Message-ID: <19970115.215840.9670.1.dr.electron@juno.com>

Good point. This brings to mind my first interview (with ITT/Federal Electric ) after leaving the Navy. After the usual small talk, mastery of Buzzwords portion, and technospeak phases, The engineer interviewing me ( a good one, I might add ) delivered the Double-Whammy, Coup de Grace, intended for correspondence course types, ( NO PAN INTENDED, I know some great ones ) , pulling from a desk drawer, for identification and discussion :

A fully packed cigar-box full of components. UGGGH! ( NOT ! )  
My foible: Misidentifying a modular double-balanced mixer as a mil type hermetic relay. I was then on to the next phase, filling out the endless paperwork of new employment. At 8 :00 am next day, I was a full-fledged, puke-beginner R&D RF tech., over my head ( again ), and loving it.  
And, as I soon learned, engineers are just like anyone else.  
Good, bad, and/or ugly. Pick their brains accordingly; you can't lose.  
Rich P, " dr.electron@juno.com "

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: bdhall@ghg.net (Benjamin D. Hall)  
Subject: Re: \$urplus \$ales of Nebraska  
Message-ID: <32DD7AD5.33F0@GHG.net>

Regarding Surplus Sales of Nebraska's "high" prices, someone wrote:

> Yes, it's a good laugh, at first, for those of us who collect and appreciate  
> the old iron, but think about the downside of this type of price gouging.

There is no such thing as "price gouging" in a free market economy. As I've said, YOU CANNOT CHARGE PRICES THAT ARE HIGHER THAN PEOPLE ARE WILLING TO PAY. Charging a high price isn't a crime, it isn't an outrage, it is just capitalism, plain and simple. Don't want to see high prices? Don't pay them. Vote with your feet folks, complaining about it doesn't do a gosh-darn thang.

73,  
Ben

--

-----  
From the computer of | Collector of fine firebottle  
Benjamin D. Hall, Houston Texas | equipment, as well as other things  
BDHall@GHG.net (home) -or- | involving Earth, Air, Water, and  
Benjamin.D.Hall1@JSC.NASA.gov | Fire.  
-----

\*\*\*PLEASE NOTE MY NEW HOME E-MAIL ADDRESS above.\*\*\* My old address, BDHALL@GHGCorp.com, will still work for a period of time however.

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Ho4bart@aol.com  
Subject: Re: \$urplus \$ales of Nebraska  
Message-ID: <970116024326\_1510124326@emout14.mail.aol.com>

In a message dated 97-01-15 14:30:18 EST, pmills@a.crl.com (Phil Mills) writes:

<< .now it seems they want you to  
pay up front before they rip you off.... >>

i lived in omaha for 6 months in 1995, and had the opportunity to visit this company in depressing hasbeen downtown omaha. i have to say, in my opinion this co. is customer unfriendly, whether you shop catlg or instore. quite unlike the traditional "surplus shopping experience". well i suppose that era is over forever; most of the surplus places couldn't keep enuff coming in to make it worthwhile. and no reflection on nebraskans: they are the best.  
hue miller

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Ho4bart@aol.com  
Subject: Re: \$urplus \$ales of Nebraska  
Message-ID: <970116024852\_1925262327@emout11.mail.aol.com>

In a message dated 97-01-15 16:46:45 EST, azoth@netcom.com (Az0th) writes:

<< An \$1800 SP600-JX21A?  
>>  
is there a Japanese edition of the catalog?  
hue miller

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: azoth@netcom.com (Az0th)  
Subject: Re: \$urplus \$ales of Nebraska  
Message-ID: <199701162027.PAA01235@netcom6.netcom.com>

Hi Bill,

> > ANYWAY, leafing through some early 60's CQ mags today, I came upon an  
> > article concerning a clever device called a 'T-R adapter' which allows,

..  
> > VFO freq into something the VFO-controlled transmitter can use, using  
> > one xtal and a couple of common tubes.  
>  
> I had heard of this being done but have never seen the article. Is it  
> specific or just theory? I know that the CE100V was designed for such  
> service and every add I ever saw by CE showed the 100V with an A4.  
>  
> If the article is relatively specific in scope I would like to have a  
> copy and will gladly reimburse for time, copying and postage.

The article itself is "The R-T Coupler, Model II" by James Taylor W2OZH, and is in the October '61 CQ, and is 6 pages long, with schematics plus design equations, tables and alignment procedures. The author is using a 75A-2 and not a 75A-4 as I thought, but I believe the VFO freqs are the same for both in any case. The article is detailed enough to build one of the beasts, though you will no doubt have to translate the North Hills variable inductors (7 #100-D 4.5-8.5 uH and 1 #1000-H 29-55 uH, plus 7 #S-120 shield cans) into something more modern.

I'd be happy to make copies of this article and the other one I mentioned (4-61 CQ, "The Ultimate Conversion of the Super-Pro Receiver" by Reed) available for an SASE (ie, self-addressed, stamped envelope). These will fit in a standard, legal-size envelope, so nobody should have to wait for me to get around to the P0.

The mass extinction of separates as the transceiver era dawned is a fascinating thing, and the half-step of transceiving separates, as opposed to 'twins' made by the same manufacturer, is a facet of the period that I'd scarcely been aware of.

73 de KF4FJH

RF Buchanan  
763 Palmer Drive  
Herndon, VA 20170

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: "Jim Berry" <basalop@eskimo.com>  
Subject: 12.5 volt fil xfrmr needed  
Message-ID: <199701160637.WAA06399@mail.eskimo.com>

Hello Tube Fans,

I need a one rated at 3.5 amps for my TCS power supply project.  
Anyone out there in BA Land got one they will sell me?

73 Jim K7SLI  
basalop@eskimo.com

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: "Ray L. Mote" <rmote@rain.org>  
Subject: Re: 3.2 to 8 ohm audio outputs  
Message-ID: <Pine.SUN.3.95.970116013125.21177C-1000000@coyote.rain.org>

This may be dumb, but would the "3.2 ohm era" be correlated in any way  
with wartime shortages of both copper and steel?

73.....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Allan Fritsche" <fritsche@msn.com>  
Subject: 3.2 to 8 Ohm audio outputs.  
Message-ID: <UPMAIL03.199701160057060715@msn.com>

Hi gang, thought I would let anyone that was interested know, that the  
transition from 3.2 ohm audio transformers to 8 or 16 was due to the advent of  
solid state gear (mainly because of auto radios) in the late 50's.  
BTW, in 1957 I was 10 years old, so I can plead ignorance because of age.

This info came from a source on the BA list that I will not name, I've been in  
enough trouble lately for mentioning a source without their approval.

Still reading Internet Etiquette 101.

Your friend al  
fritsche@msn.com

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Al Klase <alklase@prolog.net>  
Subject: Re: 3.2 to 8 Ohm audio outputs.  
Message-ID: <199701160401.WAA07182@uro.theporch.com>

At 06:54 PM 1/15/97 -0600, Allen Fritsche wrote:

>Hi gang, thought I would let anyone that was interested know, that the  
>transition from 3.2 ohm audio transformers to 8 or 16 was due to the advent of  
>solid state gear (mainly because of auto radios) in the late 50's.  
>BTW, in 1957 I was 10 years old, so I can plead ignorance because of age.  
>

This may be true, but it was actually a return to 8 ohms. I checked some pre-WWII catalogs from 1938 and 1941. The majority of speakers listed were of 8 ohms impedance. Also some were rated "6-8" and a few rated 3. By 1949, the next catalog I have, the great preponderance of small speakers (less than about 8 inches) are suddenly 3.2 ohms. Larger speakers and PA units are mostly still 8 ohms though.

Does anyone know where an odd value like 3.2 came from?

73,  
Al

Al Klase - N3FRQ  
alklase@prolog.net  
Flemington, NJ

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Allan Fritsche" <fritsche@msn.com>  
Subject: 3.2 to 8 ohm Credits  
Message-ID: <UPMAIL03.199701170037540148@msn.com>

Hi Gang , got some responses to my burning question about why the transition from the 3.2 to 8 ohm speaker output happened.  
Credit for the post, was from Carl, as the text follows:

km1h@juno.com

It was called "solid state". The popular consumer grade SS equipment had a 8 Ohm (roughly) output impedance. Many early SS radios did away with the audio xfmr entirely much to the dismay of early tech shops when the xfsistors blew without a load. That impedance and also 16 Ohms have become a popular standard today.

For most practical BA use, the 8 Ohm speakers will work fine on an old 3.2Ohm system..keeping in mind the total power restriction. I have had to replace the 12" speaker in an old FADA AM/SW console with PP 45's to a modern 8 Ohm equivalent. It not only matches the original mounting holes but it sounds great and the 82 yr old owner is happy. After all, this is not rocket science.

73.....Carl

Now, others have responded, but I noticed they posted to the list. so I won't repeat.

Thanks Guys.  
Al

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Bob Roehrig <broehrig@admin.aurora.edu>  
Subject: Re: 3.2 to 8 ohm speakers  
Message-ID: <Pine.ULT.3.95.970116184937.29918A-100000@admin.aurora.edu>

Just a reminder that there are also some 45 ohm speakers floating around out there too. These were popular for intercoms (less loss with long lines). I also see speakers in the 20 to 30 ohm range on occasion. A lot of these are used in low power portable stuff - easier to drive from low power IC amps. When looking for a BA speaker, I usually just check it with an ohmeter. The DC resistance check is usually good enough to determine what the speaker is.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI  
CIS: Data / Telecom Aurora University, Aurora, IL  
630-844-4898 Fax 630-844-5530

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: the-radio-doctor@juno.com (Rob D Long)  
Subject: 32V-3 For Sale  
Message-ID: <19970115.062306.6270.0.the-radio-doctor@juno.com>

Hello to all list members, I've been having major problems with my e-mail! if mail bounces or I do not reply please try again!

Selling my Collins 32V-3 Works Great, Cosmetically Pretty nice. I'll email a detailed description to any interested. Best offer over \$250.00

73 to all, Rob.

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: DCPIN@aol.com  
Subject: 6146's

Message-ID: <970116141130\_1011911580@emout19.mail.aol.com>

I recently got some 6146's from an auction. These appear to have been used but look ok for whatever that's worth. They came in plain white boxes and under the writing that says 6146 is the figure "35/54" or "35/66". Could these figures represent something? Any ideas? Are there testing figures or parameters for these? Also, are the 6146B's the same as the non b' and when you use them in a pair do you put B's with B's etc?

Thanks for informing this ignorant old ham.

Chris K04QW

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>  
Subject: Re: 6146's  
Message-ID: <199701162025.0AA15888@lesol1.dseg.ti.com>

At 01:45 PM 1/16/97 -0600, Chris K04QW, wrote:

>... They came in plain white boxes and  
>under the writing that says 6146 is the figure "35/54" or "35/66". Could  
>these figures represent something?

Such four digit codes frequently are lot date codes. 35/66 would be interpreted to mean the tube was manufactured during the 35th week of 1966.

FWIW, date codes are frequently found on tubes, transistors, IC's (no offense intended) and custom parts and are often written without the slash (e.g., 3566). When I get a new piece of gear I frequently search for date codes in order to determine the approximate date of manufacture.

Regards,  
Bill Sorsby, N5BU

\*\*\*\*\*  
bill.sorsby@dlep1.itg.ti.com  
Views expressed herein are no one's fault but mine.  
\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>

Subject: Re: 6146's

Message-ID: <970116222643\_75121.100\_IHV75-5@CompuServe.COM>

Chris!

That is the way I mark any tubes that I test also. The first number 35 is the minimum number on the TV-7 tube tester. The second number is the actual reading above the minimum. That's a good tube. The other readings indicate a good tube also. When I purchase used tubes from Dan Nelson, ALL his boxes are marked that way. I don't know about using "B" tubes with non "B"

Regards from Hawaii,  
Raymond J. Cote

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997

From: Richard Hager <rhager@millcomm.com>

Subject: Re: 6146's

Message-ID: <32DEA55B.2140@millcomm.com>

I hoped John S. might answer this one, as he knows an awful lot about tubes, and I don't. But I'll wing it....

As far as I know, the 6146 "B" is a significantly more robust tube than a plain '46. The books list the plate dissipation as 35 watts for the 'B', instead of only 20-25 watts for the plain 6146. That's a big difference.

- a) I'd definitely use the exact same type in any 'pair'.
- b) I'd be careful using plains in any ckt originally using a 'B'.
- c) 'B' should work fine in any ckt originally calling for plain.

--  
--

Richard Hager

+ Ah-ha! Design Group, Inc. -  
+ Precision CNC Technology, since 1991 -  
+ 612-641-1797, Fax: 612-641-8681 -  
+ "I just like to make things" So... -  
+ ...please call Ah-ha! directly for CNC info -  
+ <http://www.millcomm.com/~ahha> email: [ahha@millcomm.com](mailto:ahha@millcomm.com) -



From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>  
Subject: Re: 6146's  
Message-ID: <v03007800af048925afed@[134.53.65.12]>

At 6:35 PM -0400 1/16/97, F r6fqHo!ht wrote:

>Chris!

> That is the way I mark any tubes that I test also. The first number 35  
>is the minimum number on the TV-7 tube tester. The second number is the  
>actual  
>reading above the minimum. That's a good tube. T

>Raymond J. Cote

I use a marking pen to mark any tested tubes on the glass envelope with a number of 1-10, corresponding to the percentage on the "quality" meter of my tester (10= 100%, 9=90%, etc.) I use a TV-2/B tester, which lends itself quite naturally to this scheme. Any tube that falls below the minimum acceptable rating (e.g. 60%), I throw away, so as a practical matter all my checked tubes are marked 6,7,8,9,10.

Jim W8ZR

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Spencer Petri <spetri@e-tex.com>  
Subject: 6JH8 Info  
Message-ID: <m0vkvwz-0000NbC@e-tex.com>

Hello Tube Types,

There have been several posts concerning the 6JH8. Swan used this tube in a number of transceivers.

CQ Magazine, December 1966, has a SSB construction using it as a balanced modulator/oscillator in a SSB generator.

73 de Pete WA5JCI

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>  
Subject: Re: 900 MHz RF Exposure  
Message-ID: <61575.owen@apollo.eeel.nist.gov>

>> Anyhoo...my question is that while this beast is going (probably 24  
>> hours a day) is there any risk from exposure? When I am on the roof  
>> working on my HF antennas I would be probably 3-8 feet away from these  
>> antennas at approximately the same height as them. What cha  
>> think...am I a worry wart...or should I go ahead and increase my life  
>> insurance? Should (could?) I request they shut it down when I am up  
>> there? 73

>> Guy AC5HL

>>

>

With no tables to understand what the field strength and power density is at the 900 Mhz that Guy asked about I can only go on a gut feeling. With 150 W average power into the 2 vertical's (forget #3 as it less than 2W) I think that at the 8 ft distance there is no problem, at the 3 ft distance I would stay there the minimum time I could. Remember that 900 Mhz is pretty close to the microwave oven's frequency (about 1600 Mhz) and the power of 300 W is pretty close to a medium power microwave. Now if you feel safe standing 3 feet in front of your microwave oven with the door OPEN and the interlocks jumpered then 3' in front of these antenna's shouldn't cook you too much.

> Third. But, we should all become aware of it.

>

This we must.

> Thus, in your controlled workplace environment, the limit would be  
> 900/300 or 3 mw/cm<sup>2</sup> on your body. How you arrive at the measurements  
> and calculations for that, I dunno, yet.

>

>

It takes expensive equipment.

> Fifth. I would be very much aware that our open breadboard style rigs  
> and end fed simple antennas can make for fairly substantial rf fields  
> in the shack and near the antennas. Generally, if we are running the  
> FCC mandated 50 watts PEP output or less, we don't have to go to the  
> extreme of an environmental assessment. For those of us with barnburner  
> sized gear, we need to do the environmental assessments. Also, it might  
> affect the power we will be able to operate at, in the future. These  
> are things to consider. Our lowendian glowbuggite rigs are probably  
> quite acceptable, even in worst case situations. But, as we approach  
> the 807 sized finals and up, we are probably going to have to keep tabs  
> on the RF around the shack and the antennas.

>

> We should note that our family and ourselves as the ham operator are  
> considered a controlled environment for the FCC definitions, but  
> our neighbors are considered in an uncontrolled environment.

>

I think where we are going to have the problems if we run over 50 watts is the fellows that run an attic or indoor antenna in an apartment building. You will have to use the lower power density for the general public since you don't know where your neighbors are. Those that try to conceal their outside antenna by running it along the fence or putting the vertical in a tree or on an outbuilding are going to have a problem--possibly. We do have to wait until the FCC completes their charts on what will be a problem. We then compare our power level and antenna to what the chart shows and make a notation in the log book--you do keep a log book don't you? This is a good case for zoning in that the Higher the antenna on the tower the safer. Maybe the FCC should encourage all Hams to put up a 100 ft tower and preempt the local laws because of safety!

> Mebbe there are some things we might consider/discuss/do?

>

> Anyway... these are some things we need to be aware of and consider.

>

> 73/ZUT DE NA4G/Bob UP

>

Bob's right there are things that we MUST consider in the future. IE if we're running 500 watts to that backyard ground mounted vertical are the neighbor-hood kids playing in OUR backyard? Might have to place some NO TRESPASSING signs around our house to protect ourselves.

73 Jim K4CGY

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997

From: Tom Norris <badger@telalink.net>

Subject: AT-1082/PRC DF unit found in closet. Anyone need it?

Message-ID: <3.0.32.19970116181204.0068f6b8@telalink.net>

I stumbled upon a nice clean complete AT-1082/PRC DF antenna set for the PRC-25 and 77 radios. Or any receiver in that range. Clean canvas case, reel with longwire antenna, and DF unit with adapters. Covers 30-80 Mc. Nice little handheld loop DF system. Works well -hooked it up to the SP-600 and DFed some cordless phones last night!

Dont need it. Any takers? Offers?

(I refuse to donate it to work to DF the Low Band 45 Mhz radio system we use, and hate to throw it away)

Thanks!

\*\*\*\*\*

Tom Norris KA4RKT  
badger@telalink.net Nashville, Tennessee, USA

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Eagles may soar free and proud, but weasels  
never get sucked into jet engines.

\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>  
Subject: BA Capacitors FS  
Message-ID: <970116222556\_75121.100\_IHV75-1@CompuServe.COM>

Gang!

I have some capacitors for sale now. These are mostly older style, octal, radial and vertical twistlock and nut lock and a few with threaded screws. The entire list will be available in the archives sometime later as I just sent it to Jack (Listproc@theporch.com). If you want to get the list via e-mail, send me a note and I will have it sent to you asap. Some are already gone as the word is getting out fast. Please check with me on availability. As usual, first come first served and I will use the date of the messages as the time stamp on priority.

Raymond Cote  
1405 Dominis St #105  
Honolulu Hawaii 96822

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: don merz <71333.144@CompuServe.COM>  
Subject: Best ('30's) Receiver  
Message-ID: <970116170714\_71333.144\_DHB89-7@CompuServe.COM>

Hank said it better than I would have: "30's circuits, 30's tubes and 30's design." I am always surprised that stuff like Collins and Johnson gear is more popular and commands higher prices than gear from the 30's. The 30's--when radio was young--is the era that has the big radio excitement for me. When you read the articles in the QSTs, Radio and Radio News from the 30's you can't help but be enthusiastic. It was an exciting time, even with the depression in full swing.

Best receiver? Well, probably the National AGS-X. But since so few have

ever heard one, let's settle for the National FB-7XA.

Best CW RX: Probably the RCA (military) RAL

Most fun to use: Probably the National HRO. Heck, plug-in coils,

mechanical PW dial, frquency charts--what's more fun than that?

Ahhh, this armchair boatanchoring, how the mind does wander.....

73, Don

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Ho4bart@aol.com  
Subject: re: best 30s receivers  
Message-ID: <970116152219\_1244001556@emout16.mail.aol.com>

well even in this decade you have quite a difference in technology from early 30s to late 30s, starting with mostly regen ckts and finishing with the HRO and the Hammarlund superpro. the latest 30s equip like the Hammarlund is what i would suggest as best -- no monkeying with plugin coils ( a 1920s technology) and really good variable selectivity, and direct dial readout, no lookup table. re FB-7: poor image rejection, isn't that true? and the AGSX i owned seemed to have abysmal stability. HROs are fine but plugin coils and lookup graph for finding freq? it amazes me that Nat'l carried this technology so long. well on the other hand, Hammarlund carried the old 2-dial superhet into the 70s. RAL= fun receiver, but how could this regen be better than an HRO? the audio filtering isn't that much of a bonus.  
hue miller

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: johnz@earthlink.net  
Subject: Best receiver and WTB: RAL-7 Navy Receiver  
Message-ID: <199701162152.NAA06540@spain.it.earthlink.net>

There have been a number of comments about this receiver here over the past month. I have been looking for one for a couple of years and wonder if anyone here can help me or has leads.

A good friend's father was in charge of shipboard electronics on the escort carrier Chenango, CVE-28. I was captivated as he related many of his onboard experiences to me! I literally exhausted him trying to get more. He emphatically stated that the RAL was the best CW receiver that he ever used. Since then I have wanted to experience this myself and connect myself with his era. I recently questioned him more about this unit to get a better idea of wht I am looking for (I have never seen even a picture).

Here is some of his response:

John: I do not know what the difference is between RAL-7 and RAL. The -7 is made for AC operation and has separate power supply. The RAL-7 consists of a Navy Type CND-46156 receiver, a Navy Type CND-20131 Rectifier Power Unit (power supply), and a Navy Type CND-23073 Control Unit. The control unit is nothing more than a small box with earphone jacks and switches so that the set up can be used with a matching low frequency receiver which is the RAK-7. It is not needed for operation of the receiver.

Can someone here clarify any differences between the RAL-7 and RAL for me? I am suspecting that the -7 refers to the complete receiver/power supply package.

Thanks again for any leads or information you can give me!

John Zitzelberger W6GL  
1563 El Cerrito Drive  
Thousand Oaks, CA 91362  
johnz@earthlink.net

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: William Donzelli <william@ans.net>  
Subject: Re: Best receiver and WTB: RAL-7 Navy Receiver  
Message-ID: <199701162240.AA25578@interlock.ans.net>

> I am suspecting that the -7 refers to the complete receiver/power supply  
> package.

The seven designation only refers to the series of RAL the Navy procured. In this case, it means the \_8th\_ series (RAL was the first, then RAL-1, RAL-2, etc., thru RAL-8). The designation "RAL-" refers to the entire set (called a Navy model number) - receiver, supply, control unit, spares box, etc. Officially, the receiver has a Navy type number, like Cxx-46xxx, just as the supply has a Cxx-20xxx number.

It should be noted that the -7 does not have anything to do with the contract sequence. RAL-7s were procured under at least two contracts, one of which was after RAL-8s.

Taking your question literally, the original circa 1934 model RAL may be different from the RALs we all know and love (mostly -6s and -7s, a few -5s, but not -8s, they were not nearly as good). The military often changed equipment just after an initial run - the radical changes to the BC-191 and 224 are good examples. For that matter, you will notice that

most Signal Corps BC- things are -As or later.

I would like to hear from anyone that has RAK/RAL stuff earlier than the -5 series (yes, the 1930s radios are the most fun) - I have questions.

More information about military taxonomies than you ever knew you needed to know...

William Donzelli  
william@ans.net

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Ho4bart@aol.com  
Subject: Re: Best receiver and WTB: RAL-7 Navy Receiver  
Message-ID: <970116180819\_1143332713@emout16.mail.aol.com>

In a message dated 97-01-16 16:55:03 EST, johnz@earthlink.net writes:

<< The control unit is nothing more than a small box with earphone jacks and switches so that the set up can be used with a matching low frequency receiver which is the RAK-7. It is not needed for operation of the receiver. >>

the "7" suffix just means the 7th production contract for this equip. sometimes there are major or minor differences between the series. for example between the TCS 11 and 12 you can't see any difference but the GP-2 and GP-6 are very different! actually the "RAL" nomenclature includes the whole setup, ACPS and audio box. I think the audio unit was so a watch could be maintained on 500 kc/s no matter where the other receiver was tuned. ( RAK + RAL ).

If you heard some good stories, you should (please!) get these into print and share. even if not appropriate for BA, some magazine like "Military" out of sacramento ca. ( sister publication to Worldradio ) would gladly use this!! regards hue miller

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>  
Subject: Book Impression: Shortwave Receivers, Past and Present  
Message-ID: <199701161624.KAA10423@lesol1.dseg.ti.com>

Greetings,

The book, Shortwave Receivers, Past and Present arrived in the mailbox yesterday. It covers communications receivers from 1945 - 1996. It's

nicely packaged, including a high quality photo of each receiver, its features, **specifications**, tube listing (with functional name) for firebottle stuff, list of accessories marketed for each receiver and also a comments section which generally lists the frequency ranges covered along with other interesting tidbits of information.

Each receiver is rated from one to five stars. The new price for each receiver is listed along with an estimated current used price range. The rarity of each receiver is also stated.

It's a nice book packed with lots of information about the receivers but it didn't take long to find some rather glaring errors. For instance, under the SP-400-X listing it states that the BC-779B is the military version of the SP-400-X. In fact, the BC-779A(B) is the military version of the SP-210(200)LX. For the SX-101, the book lists frequency coverage as 80 - 10 with 6 and 2 meter converter band markings. They assumed that the SX-101A coverage applied to the earlier models which I understand covered 160 - 10 and had no VHF converter band. Knight Star Roamer manufacture dates are listed as 1967-1972. Since I built a Star Roamer in '64 I know this to be incorrect. Since I spotted these errors in about an hour of looking through the book, I assume that the book is loaded with similar errors.

Am I glad I bought it? You bet! Despite not covering pre-1945 receivers and despite the errors and omissions it contains a wealth of info. I find the pricing info in it to be highly inaccurate, though. Prices are grossly overstated for quite a few receivers while grossly understated for quite a few other. (For fear of starting yet another thread on this topic, I've not included pricing examples. ;-)

Hope that this info is useful to anyone contemplating purchasing this book.

Regards,  
Bill Sorsby, N5BU

\*\*\*\*\*  
bill.sorsby@dlep1.itg.ti.com  
Views expressed herein are no one's fault but mine.  
\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Jay Coward <jayc@hpcmr42.sj.hp.com>  
Subject: can o' worms  
Message-ID: <9701160145.AA16664@hpcmr42.sj.hp.com>

Greetings to the group,



My apologies to the BA clan and to Jack for opening the proverbial can o' worms i.e. SSofN.I intended only to offer some information to anyone who might be able to use it and \*NOT\* open a thread that has been hashed out in the past. Thanks for the BW.  
73, Jay

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Joe Eide <jeide@eau.net>  
Subject: Re: Collins Speaker Refurb  
Message-ID: <32DD935E.5B92@eau.net>

Richard L. Duell wrote:

>  
> I have a Collins speaker that I believe matches my 75A2.  
>  
> Question! What in the world could I use to restore the original  
> flocked surface. If no one knows of anything, has anyone painted one?  
>

The easy way out would be to contact Morton Jones at 619-789-6794 or PO BOX 2131 Ramona, CA 92065. Morton makes reproduction grills for a reasonable cost and they look great. Good luck .. Joe KB9R

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Mike O'Brien" <mobrien@lib.drury.edu>  
Subject: RE: Controlling xmtr via 75A-4  
Message-ID: <Pine.3.87.9701152223.A21544-0100000@lib.drury.edu>

KF4FJH wonders if anyone has tried slaving a CE 100V to a 75A-4...

A wonderful Collins engineer, Gene Senti, got to tinkering with his personal 75A-4 in his home basement shack, investigating the possibilities. As he achieved success (I cannot remember what transmitter he paired it with), he told some of his cohorts at work. Word got around to Art Collins, and one evening Gene answered a knock on his door to find the boss asking to be shown around the shack. (In recounting this story to me a few years ago, Gene said he was mortified because he'd had no forewarning and his shack was even messier than usual.) Anyway, next day Art ordered a team assembled to begin seriously exploring this notion. The KWM-1 was the first result, followed by the S-Line, KWM-2, etc. Gene told me the reason they came up with the KWM-1 first was that Art thought that mobileers would be most interested in transceive operation because it would lessen their hands' time away from the steering wheel and

gearshift. It wasn't immediately apparent that transceivers would be popular in home shacks as well. And, of course, most BA'ers would still maintain that to be the case...

73, Mike, KOMYW

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: "David L. Thompson" <thompson@mindspring.com>  
Subject: RE: Controlling xmtr via 75A-4  
Message-ID: <199701161828.NAA69978@mule0.mindspring.com>

There were several articles on letting the 75A series control the transmitter in the magazines.  
The one commercial version I remember was the P&H VFO-Matic. One model 8020 let the 75A  
(I know hams that used the 75A3 and 4) work with the HT-32, GSB100 and most 9Mhz exciters.  
The 8020-1A worked with the Drake 1A. Both only controlled 80 and 20 meters! I used to work  
a station in new Jersey who used the VFO-matic with the 75A4/KWS-1 which was not transceiver  
operational either.

I also remember that Hammarlund tried to build in a transceiver control in the HQ170A and HQ170A/VHF that worked with the HX50A (used the HX50A osc) and perhaps other gear.  
Anyone ever use or try to use the Hammarlund version?

73, Dave K4JRB

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: FPorzelt@seic.com  
Subject: Crystals for 2-NT  
Message-ID: <vines.I,I8+Y7brmB@WAYNE.SEIC.COM>

Hello All.

Anyone have crystals for Drake 2-NT transmitter they'd be willing to part with? If not, maybe you have advice for this neophyte on what "type" to look for?!? I presume there are different "sizes" and socket/holder configurations for various rigs?

Thanks for reading this, thanks even more for your patience with a basic question like this. 73!

Humbly yours,

Fred KB9MVU

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997

From: jproc@bellglobal.com

Subject: Re: Date Codes (was 6146's)

Message-ID: <Chameleon.4.01.2.970116173437.jproc@>

FWIW, date codes are frequently found on tubes, transistors, IC's (no  
>offense intended) and custom parts and are often written without the slash  
>(e.g., 3566). When I get a new piece of gear I frequently search for date  
>codes in order to determine the approximate date of manufacture.

Bill,

>From what I remember, date codes on devices have been in the format: "Year/  
Week of Year" which is opposite to what you are saying. Example 8312 - It was  
built in the 12th week of 1983. Before we start propagating bad data about  
date codes, I have a question:

Was the year/week of week/year syntax changed at some point in time? Since  
1970, I can only remember the Year/Week syntax.

Regards,

-----  
Jerry Proc VE3FAB

E-mail: jproc@bellglobal.com

HMCS Haida Naval Museum

Toronto, Ontario

'Looking for a 'AN/SRC-501'

-----  
From boatanchors@theporch.com Thu Jan 16 16:42:20 1997

From: Tom Norris <badger@telalink.net>

Subject: Differences between TV-7 suffixes?

Message-ID: <2.2.32.19970116221817.0069b814@telalink.net>

What are the differences between the TV-7 variants, A, B,C,D?  
I have only ever seen the A and D version myself, and the only  
thing I could find is the D had "socket savers" on the octal, 7, and 9  
pin sockets.

Thanks

Tom Norris  
badger@telalink.net

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: John Shriver <jas@shiva.com>  
Subject: Re: Differences between TV-7 suffixes?  
Message-ID: <199701162238.RAA11346@shiva-dev.shiva.com>

There are 5 variants, TV-7/U, TV-7A/U, TV-7B/U, TV-7C/U, and TV-7D/U.

The only operational difference is that the TV-7D/U adds an additional transconductance range F, for very high transconductance tubes. However, there are alternate test procedures for the other testers, but probably with less precision. Only matters on really really high-mu tubes.

The important circuit difference is that later models have more ferrite beads on the wires to the tube sockets. Less likely to oscillate when testing high-mu low-cap tubes like 6DJ8 or 417A.

Otherwise, the differences are improvements in the calibration process and maintainability. For instance, a TV-7/U has some "Select at calibration" resistors, particularly in the line voltage circuit. Later ones have three sliders on one of the wirewound resistors instead of 2. Perhaps these allow you to calibrate around aging of the rectifier tubes, rather than replace them.

Most had socket savers at some point. My TV-7/U had all three. I had to replace the octal one. Well, the 7 pin one could stand replacement too, but I have no source for a replacement. I suspect some have been removed and not replaced as they wore out. (Bad move. Replacing a socket looks obviously difficult.)

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Miro Klima <mattj@oraus.com>  
Subject: Drake 2A vs 2B/C  
Message-ID: <01BC039F.53569D80@mattj.oraus.com>

Gang,  
I have been following the thread on the best receivers or at least the most favorite and keep seeing the Drake 2B appearing quite regularly. I have a 2A and am well pleased with its performance for its small footprint and tonnage. What's the difference and why is the 2B the rig of choice?? The A and B appear

to look (superficially at least) the same and the tube lineup also appears similar, but I have never had the chance to try a B.

Can anybody fill me in on this?

73 de Matt WB2VZS

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: azoth@netcom.com (Az0th)  
Subject: Re: Drake 2A vs 2B/C  
Message-ID: <199701162228.RAA19101@netcom6.netcom.com>

Hi Matt,

> Drake 2B appearing quite regularly. I have a 2A  
> and am well pleased with its performance for its  
> small footprint and tonnage. What's the difference  
> and why is the 2B the rig of choice?? The A and B appear  
> to look (superficially at least) the same and the tube  
> lineup also appears similar, but I have never had  
> the chance to try a B.

I've got good examples of each of the 2-A, 2-B and 2-C, and have spent some little time playing them side by side, feeding them all simultaneously with a PMM (that's Poor-Man's-Multicoupler: a RatShack AV distamp) so's I wouldn't wear out my coax switches. Each has it's own Q-multiplier and calibrator, and each seems to work well.

Subjectively, the 2-C seems to work and sound a lot like the 2-A. It's missing the passband tuning of the A, but has an additional .4 kc bandwidth position available for CW, besides the 4.8/2.4 kc voice settings.

The 2-B is overall more selective, with 3.6/2.1/.5 kc positions, and it does play that way. The Q-multiplier works remarkably well on CW, and with a bit of fiddling you can shave a signal \_clean\_. The 2-B lacks the creature comforts of the 4-line, but I've also done side-by-side comparisons with 4/A/B/C radios, and except for the QRM-fighting xtal skirts of the R-4C, the little 2-B can hear as well as any of them. And after the B has had its way with a signal in the mud, it actually sounds good.

There is a difference, though, in how to get the best out of the 2s, especially the B. It actually has to be \_operated\_, like, RF gain this way, PBT that way, Q-multiplier balance, volume,

preselector... Going after each signal needs a little dance on the controls, a little finesse. It's a sports car kinda thing, a personality that begs to be played because it can be. I think the 2s, but especially the B, are the Sunbeam Tigers of the era.

Cheers es 73  
de KF4FJH - RF Buchanan

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: k9gdt@juno.com (George P Sieverson)  
Subject: Re: Drake 2A vs 2B/C  
Message-ID: <19970116.183307.8822.4.K9GDT@juno.com>

Greetings Matt and fellow thermionic emissives and emissivette(s):

I'll step up to the podium here because I've owned both receivers. Each was equipped with the matching Q multiplier/speaker.

The only meaningful difference for me was the 2B's improved selectivity (500Hz) for CW. I spent my novice days using the 2A, whose narrowest selectivity was 2.4Khz. It could be a real character builder trying to dig CW signals out of muderous 40m evening QRM on that receiver. The Q multiplier helped, but was no substitute for real skirts.

When I upgraded to the 2B, I felt the CW world was mine! IMHO, If you want to operate AM or SSB, there is little "real world" difference between the two radios.

Just my \$0.02 worth.

Cheers 'n beers,  
George

\*\*\*\*\*  
George Sieverson  
Barrington, IL  
K9GDT@JUNO.COM  
\*\*\*\*\*

On Thu, 16 Jan 1997 13:37:09 -0600 (CST) Miro Klima <mattj@oraus.com> writes:

>Gang,  
> What's the difference and why is the 2B the rig of choice??  
>.....Can anybody fill me in on this?  
>

> 73 de Matt WB2VZS

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: dr.electron@juno.com (Richard L Paton)  
Subject: Re: Dry transfer decals  
Message-ID: <19970115.234214.8934.0.dr.electron@juno.com>

On Tue, 14 Jan 1997 20:56:22 -0600 (CST) Silvassb@aol.com writes:

>To all the BA talent out there  
>Request any info on current availability of electronic marking kits  
>brand  
>name "deca-dry" which were produced by Chart-Pak, inc.  
>I have an old book of their electronic transfers in black. It is now  
>a bit  
>dried out and the letters do not adhere very well. I am interested in  
>any  
>source of electronic transfers in WHITE.  
>Any help would be greatly appreciated for some home brew panel  
>projects.  
>  
>Thanks  
>George wa6hcx  
>

DATAK.                    Lettering, symbols, et al. Black, white, ?  
..... Vendors unknown, but presumably Newark Elec.  
URL: try this: <http://www.wesfdl.com/linecard.htm#label>  
Excellent, Includes "Clear Nail Polish". NOTE: If you thin the coating,  
allow it  
a bit of time to settle down before applying to lettering. Works so well,  
it's sometimes a bear to remove.  
Also, don't forget to check at ALL Electronics, <http://www.allcorp.com/>  
They have it all at one time or another, & cheap! ( I have No commercial  
interest , just satisfaction.)  
Will search for damark URL/Email re: catalog.        Seventy-Threes  
Rich P  
P.S. Any boatanchors have experience, interesting stories re: All  
Electronics items? Their catalogs are a kick.

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: "Bob Ragain, 303-470-2534, RAGAIN@SEDALIA.OMNES.SLB.COM"  
<RAGAIN@hubvx6.sedalia.wireline.slb.com>  
Subject: Fairchild 'scope Spectrum analyzer plugin  
Message-ID: <970116103142.2508a844@hubvx6.sedalia.wireline.slb.com>

Fellow BA'ers,

While scrounging in a local electronics junk store I ran across a cute little spectrum analyzer plug in for an old Fairchild o'scope. If I had the scope I would have jumped on it... but I don't. For anyone with a Fairchild 14 series scope, the plugin is model 74-92A and is labeled DC-100Khz. The plugin is definately BA/tube type, looked ok, but beyond that I know nothing.

It even had BNC adapters on the "little bitty" coaxial connectors on the front panel (FWIW, connectors look like the same little coax connectors inside an R390A).

I'll be glad to pass along the source information to anyone who want's to negotiate with the store directly. Marked price was about \$50. Reply direct please, easy email address is wb4ett@slb.com

Bob

-----  
Bob Ragain WB4ETT Littleton, CO

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "Bowes, Fr. Bruce" <GBB1@MARISTB.MARIST.EDU>  
Subject: Found DX-40 Manual  
Message-ID: <16JAN97.17980396.0070.MUSIC@MARISTB.MARIST.EDU>

Two minute, really, after I posted I had an answer. Great list.  
Tnx  
Fr Bowes

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Bob Duckworth <WB4MNF@atl.org>  
Subject: FREEBARD!  
Message-ID: <01BC03C3.F75A5650@office>

Free BA Radio Debris.  
Namely one BC625A.  
Has a couple of 829(?) sockets.  
No power tubes, some rusty metal tubes though.  
I picked it up in the 'free pile' att a hamfest so .....

Rules of Ware.  
Send a check for shipping when it gets there.  
Extra credit if you've sent me something free rule applies only if you



remind me.  
Decision by Friday of next week.  
Winner only will be informed.  
Retain subject line when replying.  
-bob

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Eugene Rippen <soundval@foothill.net>  
Subject: Frequencies for BA'ers  
Message-ID: <32DD793C.602E@foothill.net>

This is a multi-part message in MIME format.

-----2BA3AFD5237  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

This all started when I finally decided to sort through about 1000+ crystals. I wanted to keep those I could use, and I wanted to sort out those that were not ham usable. So, I decided to figure out what BA frequencies I could reasonably anticipate using. The result took the form of this list of Frequencies for BA'ing, Swap Meets, etc. Now that I spent most of this cold rainy day doing this, I think I will get the self gratification of having shared it.

It is a little long, but I believe almost all of you will find it useful, therefore I trust it meets Jack's approval. I tried to limit it to items related to BA.

Gene Rippen

-----2BA3AFD5237  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit  
Content-Disposition: inline; filename="FREQ1.DOC"

#### FREQUENCIES OF INTEREST TO BA'ers

These are BA nets, Calling Frequencies for BA'ers and Swap Meets.  
No Guaranty of accuracy, I have not tried them all.  
NOTE: The time is UT.

BAND	FREQUENCY	S	M	T	W	T	F	S	U.	TIME	DESCRIPTION
160	1.803000	X	X	X	X	X	X			04:00:00	VINTAGE CW
160	1.885000	X	X	X	X	X	X	X			AM HANGOUT
160	1.930000							X		03:00:00	VINTAGE, NOSTALGIA

160	1.945000	X		07:00:00	VIN. AM, GREY HAIR NET, 07: WINTER
80	3.579000			X 05:00:00	VINTRAGE CW
80	3.580000	X X X X X X X			CW BA HANGOUT
80	3.805000	X		01:00:00	COLLINS INFORMAL
80	3.808000		X X	14:00:00	COLORADO AM NET, INFORMAL
80	3.835000		X	04:00:00	VINTAGE, CALIF. EARLYBIRD NET
80	3.837000	X		21:00:00	AWA VINTAGE AM
80	3.837000		X	01:00:00	AWA VINTAGE SSB
80	3.855000	X		22:00:00	ARIZONA AM NET
80	3.865000			X 01:00:00	DRAKE & ANTIQ. TUBE SSB
80	3.867000	X	X X	02:30:00	AWA AM NET
80	3.870000		X	05:00:00	WESTCOAST AM MEET AND SWAP
80	3.870000	X X X X X X X		05:30:00	WESTCOAST INFORMAL AM MEET
80	3.875000	X X X X X X X		23:00:00	NORTHWEST AM NET
80	3.885000	X X X X X X X			AM HANGOUT FREQUENCY
80	3.885000	X		19:00:00	SOUTHEAST VINTAGE SWAP NET
80	3.885000		X	00:30:00	EASTERN AM SWAP NET
80	3.885000		X	00:30:00	SOUTHEAST VINTAGE SWAP
80	3.915000	X		17:30:00	SWAP MEET, ON SSB
80	3.955000		X	01:00:00	COLLINS SWAP, EASTERN
80	3.990000			X 16:00:00	WESTCOAST MILITARY COLLECTORS
80	3.990000		X	06:00:00	WESTCOAST MILITARY COLLECTORS
40	7.050000	X X X X X X X		09:00:00	AWA VINTAGE CW NET
40	7.050000		*	01:00:00	1ST WED. OF MO., VINTAGE CW
40	7.050000	X X X X X X X		02:00:00	VINTAGE CW
40	7.116000	X			WESTCOAST 40M VINTAGE SSB
40	7.240000	X		X 20:30:00	VINTAGE SSB AFTER SWAP NET
40	7.240000	X		X 20:30:00	WESTCOAST SWAP NET
40	7.244000	X		17:00:00	AWA VINTAGE SSB
40	7.250000		X	21:00:00	SWAP NET
40	7.290000	X		19:00:00	AM ENTRY LEVEL GEAR (DX-60?), EAST
40	7.295000	X X X X X X X			AM HANGOUT FREQUENCY
20	14.050000			X 21:00:00	VINTAGE CW, SPEED NOT IMPORTANT
20	14.290000	X		X 01:00:00	JA1DNQ AM NET
20	14.250000	X		22:00:00	SWAN NET, CENTRAL U.S.
20	14.263000	X		20:00:00	COLLINS USERS NET
20	14.274000		X	19:30:00	AWA SSB VINTAGE NET
20	14.275000	X		22:00:00	HEATH USERS AM & SSBB
20	14.286000	X X X X X X X			AM HANGOUT FREQUENCY
20	14.286000	X X X X X X X		01:00:00	WESTCOAST AM NET
20	14.293000	X		19:00:00	VINTAGE SSB NET
15	21.425000	X X X X X X X			AM HANGOUT FREQUENCY
10	29.000000	X X X X X X X			29 - 29.2 AM WINDOW
10	29.100000	X X X X X X X			AM HANGOUT FREQUENCY
6	50.125000	X X X X X X X			SSB CALL FREQUENCY
6	50.400000	X X X X X X X			K1JCL AM REPEATER 50.4 IN, 50.5 OUT
6	50.400000	X X X X X X X			AM BA HANGOUT FREQUENCY
6	50.400000			X 03:00:00	ARIZONA AM NET

6	50.400000	X	X	04:00:00	NORTHWEST AM NET
6	50.400000	X		04:00:00	SO. CALIF. AM NET
6	50.525000	X	X X X X X X X		FM SIMPLEX CALLING FREQUENCY
6	50.580000	X	X X X X X X X		FORT WAYNE AM NET
2	144.100000	X	X X X X X X X		CW CALLING FREQUENCY
2	144.110000	X	X X X X X X X		CW CALLING FREQUENCY
2	144.200000	X	X X X X X X X		SSB CALLING FREQUENCY
2	144.400000	X	X X X X X X X		AM BA HANGOUT FREQUENCY
2	144.400000		X X	04:00:00	NORTHWEST AM NET

-----2BA3AFD5237--

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
 From: Ho4bart@aol.com  
 Subject: FS SCR-522 manual, new, \$10 ppd  
 Message-ID: <970116034143\_1791887303@emout09.mail.aol.com>

forgot this one. still factory wrapped.  
 hue miller, 250 S. 900 E. # 4C  
 SLC UT 84102

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
 From: Ho4bart@aol.com  
 Subject: FS, manuals, small list  
 Message-ID: <970116032015\_879137202@emout18.mail.aol.com>

these prices are postpaid. always would prefer to swap for  
 any boatradio manual ( yes, real boat, whether anchor  
 radio or not), solidstate cb manuals, solidstate car radio  
 manuals, or military electronics manuals.

Halli HT31 mark1 \$6 HT33 mark1 \$6 Eldico EE3  
 electronic keyer and Heath HD10 keyer both/ \$6  
 Lysco mobile xmtrs 114-129-140-175 4 page mimeo  
 \$4 Swan 1200x \$6 Heath cantenna \$4  
 Globe LA-1 linear, VOX-10, VFO 6-2, VHF-62 xmtr,  
 all 4 / \$12 Heath xc-6 converter \$3

also, if i already promised to ship you something, pse

send me an email reminder of item & your qth. ( lost  
some addresses)

tnx, hue miller  
250 S. 900 E. #4C  
SLC UT 84102

\$urplus \$ales of De\$eret  
in sept. i will bring back a gonset g76 with factory acps to swap,  
i hope, for something in olive drab or black wrinkle. see what you  
can scrounge up. also sx117 and hro-60

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Ho4bart@aol.com  
Subject: FS/FT: PE-6 dyn. & R-150/CRW radio control rcvr  
Message-ID: <970116183435\_101742652@emout01.mail.aol.com>

probably this is too ancient for most-- dyn is dated 1918, vg  
condx, 10dc ==> 300dc, in heavyduty green metal box with  
carry shoulder strap. don't know what set this is for, would  
have to be some field xmtr for 300v at this date.

R-150/CRW plain alu box 10x10x4 with connector. 65-90  
mc/s, 4 audio channels, tubes rf + superregen det + 3 or 4  
audio channels, 28v dyn. this may be the thing for your  
old b-17, you pack it full of explosives and guide it into some  
enemy installation, but i can't find my docs here to proove this.  
if you know any details pse advise. this may become some  
kinda strange rare collectible, maybe not.....anyway been  
around here too long

your offer green stamps/ hardware is solicited. hue miller

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Terry Dobler KJ7F <kj7f@micron.net>  
Subject: FS: Fluke RMS Meter  
Message-ID: <2.2.16.19970116202032.255f5650@pophost.micron.net>

Gang,

I have for sale a Fluke Model 910 RMS Voltmeter. It has  
measurement ranges from -60 dB to +50 dB, has a meter damping  
switch and SO-238 input and output connectors. The meter  
reads somewhat erratically and I have not checked its accuracy.  
I do NOT have the manual for this guy. The price is \$15 plus  
shipping and in the event of more than one person wanting it,

the "Rules of Ware" will be applied.

Terry KJ7F

PS This is a true BA as it is full of tubes, it is not a hand held SS wonder.

kj7f@micron.net (Boise, Idaho) <http://netnow.micron.net/~kj7f>

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: billo@nti.net (Bill Wilson)  
Subject: FWD; SP-600 For sale...  
Message-ID: <19970116013248311.AAA219@LOCALNAME>

Greetings from Alabama...

A local individual has a Hammarlund SP-600 for sale. I have not seen it but he described it as the R274C/FRR, Rack mount set with front handles, no case. Serial number is #522. I asked about the JX designation number but he said it was not on top of the tuning section like I've seen them. He said the set is in fine working condition and looks good.

If interested contact Derrick at 205-362-6620. He is asking \$300 plus shipping, he'd of course prefer pick-up but can ship if need be. Derrick's QTH is near Munford, Al. on top of Mt. Cheaha. Contact him not me.

Thanks,

Bill  
AC4LC

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>  
Subject: Horizontal meters and tubes  
Message-ID: <970116101044\_75121.100\_IHV35-1@CompuServe.COM>

Hi gang!

1. I have come across a few DC u-a meters that are horizontal reading. They are 3.5" wide and 1.25" high (hole size), and 1/4" wider ears on each side to mount. They are center reading meters, 250 uaDC, marked ES=250uadc. I know what FS=250uadc means. FS usually means current to read Full Scale. What does ES mean? 250 ua to either end? They also have a zero adjustment lever on the lower side to facilitate easy zeroing.

The manuf is International Instruments Inc., Orange, Connecticut.

They are marked zero in the center and +1 and -1 at opposite extremities. The label on the face says pilot-db, which was the pilot signal for the underwater cable to Guam.

I can only use a few, so the rest are up for grabs. I will sell at \$5.00 ea plus \$190 shipping or 2 for \$10 shipped. Send E-mail with your needs.

Oh yes, some are still mounted in a 19" rack, 3 side by side and under them is a small meter with electrical contacts for the needle. This meter is about 1.5" square and is recess mounted, flush with the front panel. Contacts are at the min and max travel of the meter needle and can be used to trigger an audible or light alarm. I will sell the panel and three meters shipped for \$12.00.

2. I have also some old tubes that were used by AT&T, made by Western Electric for the AT&T cable system. One is labeled 310A. They are pulls from some AT&T equipment that was used for the underwater phone cable from Guam to Makaha, Hawaii and from Guam to Japan. These tubes are the old hourglass shape and include the 6-pin socket, surface mount type. the tube also has a full height shield shaped like the glass and comes apart to see the tube. Used as voltage amplifier pentodes, (44 db gain) similar to the RCA 1603, since discontinued and also similar to the 6C6. They were produced into the late 70's and still used by phone co in the 80's.

I will get rid of these for \$5.00 ea plus \$1.90 for shipping. Socket, shield and the tube. Oh yes, I also found some of the same type that have no shield, but come with a ceramic socket that can be mounted on stand-offs or in the thru-hole configuration. It also has 2 vertical rods on which is mounted a hold-down device which keeps the tube from vibrating loose. Your choice.

Raymond Cote  
1405 Dominis St #105  
Honolulu Hawaii 96822

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Morris Odell <morriso@vifp.monash.edu.au>  
Subject: HP meters  
Message-ID: <32DD8035.2B45@vifp.monash.edu.au>

Gang,

I have found an opportunity to buy one or more HP meters and I wonder whether anyone can fill me in on the differences and capabilities of some of the candidates:



400 meters are AC "average reading" meters. In general, they resemble (and competed) with Ballantine meters. 400D, 400H had identical chassis (three different configurations that I know of) but the 400H has a much bigger meter. Some of the other 400 series had different ranges than D/H. These are AC-only meters, no ohms or current scales. 400D/H is supposedly accurate 20 Hz to 4 Mhz.

410 are, I think, general purpose VTVM's, something like HP's version of the RCA VoltOhmyst or McMurdo Silver Vomax, and resemble the latter in having an active AC probe.

412A is a chopper-stabilized DC voltmeter. It is provided with shunts to work as an ammeter, and a current feed for use as an ohmmeter.

The 412A, to me, stands out. It is very accurate (much better than most HP stuff I've worked with), rock-stable (no DC drift), has 1 millivolt full scale sensitivity (through 1000 volts). Frequency response is only about 2 Hz., so it can lag if you use it to monitor detector output when aligning a receiver. The ohmmeter is 1 ohm through 100 megohm CENTER SCALE, so the 100 megohm range actually reads up to 5000 megohms (which can be well in the region of test lead leakage). A superb design, well-executed, and very useful.

--

=====

Hank van Cleef

E-mail [vancleef@netcom.com](mailto:vancleef@netcom.com) or [vancleef@tmn.com](mailto:vancleef@tmn.com)

=====

From [boatanchors@theporch.com](mailto:boatanchors@theporch.com) Thu Jan 16 16:42:20 1997

From: Morris Odell <[morriso@vifp.monash.edu.au](mailto:morriso@vifp.monash.edu.au)>

Subject: HP meters

Message-ID: <32DEA8E0.501F@vifp.monash.edu.au>

This a big thank you to the many people who responded with advice after my query on HP meters. The resources on this list are absolutely amazing! There were too many individual replies for me to answer each separately.

I will probably end up getting a 410C and a 412. As I mentioned in a previous post, prices are not as low here as in the US and as much as I would like the whole set, I've gotta eat too and there's other stuff in the sale that attracts me.

73

Morris





2) Two brown plastic knobs, an inch or so dia, push-on style for 1/4 inch flattened shaft. I could use set-screw types if the screws are recessed - this set has a hot chassis. These are for an RCA-Victor plastic-cased table radio.

Thanks

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI  
CIS: Data / Telecom Aurora University, Aurora, IL  
630-844-4898 Fax 630-844-5530

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: "Bowes, Fr. Bruce" <GBB1@MARISTB.MARIST.EDU>  
Subject: Manual for Heathkit DX-40  
Message-ID: <16JAN97.15533561.0419.MUSIC@MARISTB.MARIST.EDU>

I have been given a 'broken', 'non-function', 'unloved' relic, a DX-40. Would like to attempt to fix it and to learn more about 'vintage' equipment in the process.

I am new to this group and hope to be able to contribute and be 'active' Thanks a lot.

73 Fr Bowes KB2TRF

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Robert Fowle <hammarlund@jacksonmi.com>  
Subject: manual info & 'Sets' question  
Message-ID: <32DEAFAD.1D13@jacksonmi.com>

here are the pages of manuals i have available:

Hammarlund  
<http://www.jacksonmi.com/hammarlund/hamrmanu.html>  
Hallicrafters  
<http://www.jacksonmi.com/hammarlund/hallimanuals.html>  
mixture: Collins, National, ect.  
<http://www.jacksonmi.com/hammarlund/manuals.html>

Also, kicking around the idea of doing sets of manuals.  
(of manuals that I have)  
like All the Hammarlund, all the Hallicrafters  
could do National, and others if enough interest.  
These would be bound volumes...(not hard cover, but bound)  
i need input tho, i.e. any interest, your thoughts on  
a price...(of course i'd have to see what an venture would cost)

any input is appreciated..to see what i have, visit the pages above,  
then let me know your thoughts on the 'Sets'  
thank you

— —

\*\*\*\* Visit my Web Page.....\*\*\*\*

=====] - [->

Robert Fowle                    KC8DBC  
1215 Winifred  
Jackson, Mich. 49202-1946  
Ph. 517-789-6721  
E-mail: hammarlund@jacksonmi.com  
Web Page: <http://www.jacksonmi.com/hammarlund>

NOW... BOATANCHORS Conference!  
talk, buy-sell-trade all in one place!  
Moderator: Robert Fowle  
at: <http://www.inetnc.com/hamchat/>

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Gary H. Harmon, Jr." <gharmon@txdirect.net>  
Subject: Meter Repair  
Message-ID: <199701160436.WAA16447@legend.txdirect.net>

I have a Heathkit AT-1 with a bad meter. There is no continuity across the coil. I guess I need to carefully unwind the coil, count the wraps, and then rewind it using new wire. Is the placement of the wire critical? Does neatness count or is the main key the number of turns? I suspect that the piece of wire is wrapped in opposite directions, is this true? Any suggestions on how to proceed?? Better yet, does anyone have a spare meter that works??

Thanks in advance,  
gary

[illegible]

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: dr.electron@juno.com (Richard L Paton)  
Subject: RE: MW Reception  
Message-ID: <19970116.123333.9630.0.dr.electron@juno.com>

Hello Anchorers.

I have an oddball boatanchor, Fisher R-200-B Professional, c.1967,  
with LW, MW, SW ( 7.2-16 Mc ), and 49 meter bands, AND of course,  
GLOWFETS.

Question: Does anyone have a design for an antenna device similar to  
the "Selectantenna" by C. Crane ? Would like to enhance mw reception.  
Appologies for Antenna Query.

Thanks, Rich P. dr.electron@juno.com

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Glenn Finerman <GFINER@nms.com>  
Subject: Navy surplus??  
Message-ID: <s2de540f.001@nms.com>

A question for you "Mil heads"....My brother has been in the Navy for  
quite a few years now and once told me he occasional attends  
some kind of surplus equipment sales. I think he called them  
"DRMO sales" He said they had all kinds of stuff that sold really cheap  
and they were only open to Navy personnel. I just recently gave him  
an education as to what a "boatanchor" is, and now he knows  
to look out for such things the next time they have one of these sales.  
My question is....how likely is he to find any Collins gear? Did the Navy  
use the S-line stuff?... Someone on the ba list once mentioned there  
is still lots of stuff in storage that's just waiting to be disposed. Any  
chance of finding ANY comm's gear at all??  
Ever since I spoke to him about this I keep having dreams about him  
giving me a call....."Glenn!! I just got a truck load of Collins gear for  
you dirt cheap!".....  
Any comments about this??...What are my chances?  
Inquiring minds want to know!

73.....Glenn N2BJG gfiner@nms.com

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: paul Veltman <veltman@netcom.com>  
Subject: Re: Navy surplus??  
Message-ID: <Pine.3.89.9701161504.A25838-01000000@netcom17>

Glenn and friends,

I can only speak to the West Coast. Different DRMO (Defense Reutilization Marketing Organization) units have different items. In my years of traveling around DRMOs out West here, you will occasionally run into some Collins stuff, but I haven't seen any S-Line or earlier. There were a couple of Collins truck sized transmitters of recent vintage and a few late Rockwell/Collins receivers. I see more Racal stuff than Collins, although no true Boatanchors. In fact, the vast majority of stuff that I've screened recently is in the Hospital category. Great if you want to set up your own clinic. The vast majority of electronics that I've seen are system specific test stands for missiles and the like. And a lot of the electronics that is civilian usable is already trashed.

If you're lucky, you may eventually turn a unit or two, but I wouldn't lose any sleep waiting for it.

73

Paul WA6OKQ

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Russell\_Schroeder@xn.xerox.com (Schroeder,Russell G)  
Subject: re: Navy Training Information (repost)  
Message-ID: <"<B837DE328190677C>B837DE328190677C@X-WB-0207-MS2.XN"@-SMF->

Hollowstaters,

I sent this note out before Christmas. Replies were received from: Ed Zeranski, Mike Sullivan, Chip Owens, Dave Ragsdale, Doug Hensley, Sheldon Wheaton and Ross Lahlum. Due to my work situation, I have been slow in getting the copys. If anyone else is interested, let me know in the next several days. I will be getting the copies made early next week.

73 Russ W2DYY

Russell\_Schroeder@xn.xerox.com

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Hollowstaters,

Special thanks to Vlad Dvorkin, KB9OLM, for supplying the following partial Navy training manual information dated 7/44. I promised that

I would make copies available to any of the boatanchors list that might be interested. The following subject matter is included along with the number of pages in brackets.

Navy Training Manual (partial)

Experiment 614 - RBB Familiarization [8]  
RBB-1 and RBC-1 Receivers [23]  
Special Circuits in RBB Receiver [11]  
Experiment 610 - RAL Familiarization [6]  
Experiment 611 - RAZ Familiarization [2]  
Experiment 617 - RBK Familiarization [8]  
Frequency Modulation (Theory) [22]

If anyone is interested in any of the above information (or selected parts), please let me know.

Copying cost plus postage appreciated.

NOTE: I will accumulate responses until 1/6/97 (when I return from Christmas vacation) before getting copies made.

73 Russ W2DYY

Russell\_Schroeder@xn,xerox,com

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Gary H. Harmon, Jr." <gharmon@txdirect.net>  
Subject: Need SB-630 Part  
Message-ID: <199701160620.AAA27671@legend.txdirect.net>

Please help restore a SB-630 station console. Believe it or not the guy I bought it from removed the clock assembly and mounted a digital assembly in the face plate. Needless to say it required surgery on the plastic face plate. Fortunately he saved the clock assembly. But the face plate is a total loss. I may be able to repair it by using JB Weld to reconstruct the missing portion but a replacement face plate would be nice. So, here's the stupid question followed by extensive laughter...does anyone have a face plate or even a junker or parts SB-630 to help me out?

Thanks in advance and 73,  
gary

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<><><><><><><><><><><><><><><><><>
<> TOO MANY PROJECTS, NOT ENOUGH TIME <>
<>
<> Gary H. Harmon, Jr., K5JWK <>
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[illegible]

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Dick Dillman" <ddillman@igc.apc.org>  
Subject: Pacific Northwest BA Report  
Message-ID: <71064.ddillman@igc.apc.org>

Greetings, fellas and gal. I'm back from a trip to the Pacific Northwest that turned out to be about twice as long as I expected. Before I begin downloading what must be hundreds of waiting messages I thought I'd submit my report on the BA sites I visited. Thanks and a tip of the Baldwin 'phones to Terry Burge for his advice on places to visit.

Ham Radio Equipment, 13815-C SW Pacific Hwy., Tigard, OR 97223, Phone 503-598-4736 - Small shop, friendly proprietor, mostly BA equipment from keys on up. Stock varies greatly, apparently day by day. A 51J-3, 200V and some Heathkit were available when I visited. Old fashioned ham store atmosphere, free coffee. Worth a special trip.

Electronic Dimensions ("Surplus at its Best"), 424 Puyallup Ave., Tacoma, WA 98421, Phone 206-272-1061 - Electronics and other surplus stuff (I was tempted by an old brass tachometer in a velvet lined case) in a shop with enough disorganization to appeal to old timers. Some BAs including R-390A and Sky Buddy as well as useful items from variable condensers to variacs. Prices seemed a bit high but negotiation may be possible. Worth a visit when in the area.

Regards,

Dick

Dick Dillman  
WPE2VT W6AWO  
<ddillman@igc.apc.org>  
Collector of Heavy Metal:  
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Dick Dillman" <ddillman@igc.apc.org>  
Subject: Re: Pacific Northwest BA Report  
Message-ID: <74118.ddillman@igc.apc.org>

On Thu, 16 Jan 1997 17:03:29 -0800,  
Greg Anders <anders@autopsy.corp.sgi.com > wrote:

> Where is Tigard Oregon? Sounds like a neet place if its close to  
>Portland or some town bigger than a truckstop...

Ah, yes. I should have mentioned: Tigard is near Portland.

Dick Dillman  
WPE2VT W6AWO  
<ddillman@igc.apc.org>  
Collector of Heavy Metal:  
Harleys, Willys and Radios Over 100lbs.

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: carl yaffey <cyaffey@sprynet.com>  
Subject: power supply diagnosis needed  
Message-ID: <2.2.32.19970116035655.00766648@m1.sprynet.com>

I would love some input on a puzzling problem. I have an SX-62A that is blowing fuses and making pretty sparks in the 5U4G. This happens when I apply AC power with the operate/standby switch in standby. If I pull the 5U4, no problem. With the 5U4 out and AC power applied, the voltages on the 5U4 socket are all OK. Also, an ohmmeter shows no short to ground anywhere. I'm wondering if I have a bad xfmr, or, as W8ZR suggested, a short that only appears when power is applied. The circuit is straight-forward and simple: secondary leads go to 5U4 plates, center tap goes to standby switch, B+ comes off 5U4 filament lead and goes though a choke with some caps hanging off it. Any ideas?

-----  
Carl Yaffey K8NU (ex-W4EZB) cyaffey@sprynet.com 614 268 6353 Columbus OH  
Banjo player for One Riot One Ranger, independent software developer.

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From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Morris Odell <morriso@vifp.monash.edu.au>  
Subject: Re: power supply diagnosis needed  
Message-ID: <32DDAA5A.13BA@vifp.monash.edu.au>

Hi,

carl yaffey wrote:

>

> I would love some input on a puzzling problem. I have an SX-62A that is  
> blowing fuses and making pretty sparks in the 5U4G. This happens when I  
> apply AC power with the operate/standby switch in standby. If I pull the  
> 5U4, no problem. With the 5U4 out and AC power applied, the voltages on the  
> 5U4 socket are all OK. Also, an ohmmeter shows no short to ground anywhere.  
> I'm wondering if I have a bad xfmr, or, as W8ZR suggested, a short that only  
> appears when power is applied.

Have you checked the bottle?

Morris

-----  
Morris Odell                                      Victorian Institute of Forensic Medicine  
Forensic Physician                                      57-83 Kavanagh St, Southbank 3006  
morriso@vifp.monash.edu.au                                      Victoria,  
Australia

Web page: <http://www.vifp.monash.edu.au/CFM/staff/mo.html>  
-----

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: vancleef@netcom.com (Henry van Cleef)  
Subject: Re: power supply diagnosis needed  
Message-ID: <199701161109.EAA07708@netcom2.netcom.com>

As carl yaffey discourses

>

> I would love some input on a puzzling problem. I have an SX-62A that is  
> blowing fuses and making pretty sparks in the 5U4G. This happens when I  
> apply AC power with the operate/standby switch in standby. If I pull the  
> 5U4, no problem. With the 5U4 out and AC power applied, the voltages on the  
> 5U4 socket are all OK.

>

Have you tried another 5U4 known good in the socket. Never mind tooo  
tester stuff. Try another tube.

Also, eyeball the socket for signs of arcing from pins 2 or 8 to  
ground.

--

=====  
Hank van Cleef  
E-mail vancleef@netcom.com or vancleef@tmn.com  
=====

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Laird\_Tom\_N@hpmail1.90.deere.com  
Subject: power supply diagnosis needed  
Message-ID: <H00005a004892697@MHS>

Carl.....one thing besides Hank's answer is it could be the standby switch itself, don't know too much about the SX-62, but lots of radio's lift the negative side of the B+ at the S/B switch and maybe the switch is shorted in the S/B position or has a carbon track.

Tom Laird WC9M Moline, Il  
TL39597@deere.com

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: vancleef@netcom.com (Henry van Cleef)  
Subject: Re: power supply diagnosis needed  
Message-ID: <199701162026.NAA23785@netcom5.netcom.com>

As Laird\_Tom\_N@hpmail1.90.deere.com discourses

>  
> Carl.....one thing besides Hank's answer is it could be the standby  
> switch itself, don't know too much about the SX-62, but lots of radio's  
> lift the negative side of the B+ at the S/B switch and maybe the switch  
> is shorted in the S/B position or has a carbon track.

>  
>  
> Tom Laird WC9M Moline, Il  
> TL39597@deere.com  
>

Doesnt; the standby switch on an SX-62 break the line to the transformer plate winding center tap to B- ? This is a fairly common circuit of the 40's.

--

=====  
Hank van Cleef  
E-mail vancleef@netcom.com or vancleef@tmn.com

=====  
From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: carl yaffey <cyaffey@sprynet.com>  
Subject: re: power supply problem  
Message-ID: <2.2.32.19970116162829.00a637f4@m1.sprynet.com>

TNX to all who replied. Most of you suggested I try another 5U4. Well, I had already done that with the same result: blown fuse and 5U4 sparks. Many also suggested a shorted cap or some other short to ground. My confusion with this is that the secondary center tap is NOT connected to ground (the standby switch is open and my ohmmeter shows no connection to ground). This should mean that, even if there's a shorted cap, the circuit is NOT complete. Right? It would seem to indicate a bad 5U4, but I replaced it once. Could the "new" 5U4 from AES have been bad??? I'm left suspecting the xfmr itself.

Yours in confusion,  
Carl

-----  
Carl Yaffey K8NU (ex-W4EZB) cyaffey@sprynet.com 614 268 6353 Columbus OH  
Banjo player for One Riot One Ranger, independent software developer.

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|#===||=====|*~*~*|
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From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: "Walter L. Marshall" <wmarshall@CapAccess.org>  
Subject: re: power supply problem  
Message-ID: <Pine.SUN.3.91-FP.970116114415.2250A-100000@cap1.capaccess.org>

Anchorists,

Yes, a tube ordered from AES could definately be bad. I've had my share. They should test them as they go out the door for \*free\* but they don't. Want to charge you to test their own goods. Besides, botched orders, ect.

Walter

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Mike Toneri <toneri@ils.net>  
Subject: re: power supply problem  
Message-ID: <199701161943.0AA24877@server1.ils.net>

At 10:32 AM 1/16/97 -0600, carl yaffey wrote:

>TNX to all who replied. Most of you suggested I try another 5U4. Well, I had  
>already done that with the same result: blown fuse and 5U4 sparks. Many also  
>suggested a shorted cap or some other short to ground. My confusion with  
>this is that the secondary center tap is NOT connected to ground (the  
>standby switch is open and my ohmmeter shows no connection to ground). This  
>should mean that, even if there's a shorted cap, the circuit is NOT  
>complete. Right? It would seem to indicate a bad 5U4, but I replaced it  
>once. Could the "new" 5U4 from AES have been bad??? I'm left suspecting the  
>xfmr itself.  
>Yours in confusion,  
>Carl

Hi Carl. It is possible that the replacement 5U4 tube is defective. Perhaps  
there is a short in the primary winding of the power transformer causing the  
secondary voltage to be higher than the ratings for the 5U4 tube. If you are  
still blowing fuses without the 5U4 installed, I would suspect the power  
transformer, having seen this before in other equipment.  
73...Mike VE3FGU

\*\*\*\*\*  
Mike & Lynda Toneri     E-mail:   toneri@ils.net  
\*\*\*\*\*

From boatanchors@theporch.com   Thu Jan 16 09:10:04 1997  
From: Ho4bart@aol.com  
Subject: PRC-5 for possible trade?  
Message-ID: <970116054345\_1925270383@emout07.mail.aol.com>

i have a PRC-5 "spy radio" of ww2 production that i am  
discussing trading for a foreign piece of equipment. well  
i thot as long as i am discussing this with one person i  
might throw the bait in the waters here. i am interested  
in ww2 german or japanese equipment.  
this set in very good condx. as far as i have read, this model  
not actually used anywhere in actual clandestine usage,  
at least not in europe. possibly the lack of a dc-power  
unit limited its deployment?     hue miller

From boatanchors@theporch.com   Thu Jan 16 13:40:37 1997  
From: BEN NOCK <106312.1035@compuserve.com>  
Subject: PRC-5 Wanted  
Message-ID: <199701161346\_MC2-F58-E9C3@compuserve.com>

I would be interested in buying or swaping for a decent PRC-5 set.

Ben G4BXD

MILITARY WIRELESS IN THE MIDLANDS  
HOME OF WWII 39-45

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Richard L. Duell" <rduell@iac.net>  
Subject: QSTs for Sale  
Message-ID: <2.2.32.19970117014951.00754c24@mail.iac.net>

My bookshelves runneth over so I'm going to make a bit of room. The following complete years in binders and in very good condition are for sale at \$15 per year (plus USPS book rate postage).

'60, '61, '62, '63, '64, '66, '68, '69, '70, '71, '72, '73, '74, '76 and '78.

First come, first served.

73, Rich - W5VDU

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: bdhall@ghg.net (Benjamin D. Hall)  
Subject: queer R-390A audio deck problems  
Message-ID: <32DEA3DC.6868@GHG.net>

Hi Folks, just aquired a problemmed audio deck for my R-390A that I'd like to fix:

I've checked all the caps, replaced two, and I'm left with the following problem:

It seems that the LINE GAIN interacts with the LOCAL GAIN knob. In fact, with the LINE GAIN turned all the way to 0, the output of the LOCAL audio is diminished, and the LOCAL audio \*decreases\* in volume as I turn up the LOCAL GAIN to about 2, and then increases as I turn up the LOCAL GAIN. Now, if I set the LINE GAIN to about 5, I get more volume total, but I find that the "dead point" on the LOCAL GAIN moves upscale, say to about 5 or 6. With the LINE GAIN all the way up, I get distorted audio from the LOCAL audio, with increased volume, and the "dead point" on the LOCAL GAIN moves to about 8 or 9. Ideas before I get

down-n-dirty with the schematic looking for miswiring or bad resistors? On the schematic, the audio comes from the 1st IF AMP, thru the Cathode Follower, to the ends of a pair of pots, both 2500 ohm, one LOCAL GAIN, the other LINE GAIN, with the opposite ends of the pots grounded. The tap of the LINE GAIN goes to the LINE AF AMP and LINE AF OUTPUT, and the tap of the LOCAL GAIN goes to the LOCAL AF AMP and LOCAL AF OUTPUT. I cannot understand how the two controls would interact unless there are wiring errors, or if one amp is munching all the B+ or something. BTW, my Motorola R-390A doesn't suffer this problem either, so I think it is in the audio deck.

What says ye, Gods of the R-390A? Hast thou art containith an ideaith to what illls my audio deckith?

Ideas anyone? All the tubes test good in the TV-7D/U, and when I swap decks, the problem goes away. BTW, the problem deck is an EAC for all you Hammarlund fans, and my working deck is a Stewart-Warner... ;)

--

-----  
From the computer of                               | Collector of fine firebottle  
Benjamin D. Hall, Houston Texas | equipment, as well as other things  
BDHall@GHG.net (home) -or-                       | involving Earth, Air, Water, and  
Benjamin.D.Hall1@JSC.NASA.gov   | Fire.  
-----

\*\*\*PLEASE NOTE MY NEW HOME E-MAIL ADDRESS above.\*\*\* My old address, BDHALL@GHGCorp.com, will still work for a period of time however.

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: BEN NOCK <106312.1035@compuserve.com>  
Subject: R-103 Can info wanted  
Message-ID: <199701161346\_MC2-F58-E9C5@compuserve.com>

Hi all. I am looking for info on the Canadian version of the R103 receiver. I have a small amount of info on the British version but need circuit, layout, handbook etc whatever, for the Canadian set.

Many thanks, Ben G4BXD.

MILITARY WIRELESS IN THE MIDLANDS

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: JOHN\_SEHRING.parti@ecunet.org  
Subject: R-390 SSB MODULE  
Message-ID: <9701152125.aa15256@pcusa01.ecunet.org>

SSB agc derived from audio is an interesting idea. I showed up in QST in the mid-50's (Luick, etc., also in late 50's ARRL SSB Handbook).

One of the reasons for using it was to get away from all the bfo voltage that needed to be applied to the then-used diode envelope detectors.

I've tried it a few times (using a product detector) but found the attack time of this kind of af-derived circuit much too slow. For SSB and CW, you need very fast attack times, less than a mSec.

By the time you get to after the SSB (product) detector, a lot of rf, if and af filtering (not to mention detection) has taken place. This causes a lot of phase shift and group delay.

Unless this is accounted for, the feedback loop (agc + radio) will not be stable, e.g. it'll overshoot, come on too late, etc.

Properly designed agc for SSB will of course not do any of this and allow use of full RF gain.

Does Pappenfus say anything about af-derived agc for SSB?

-John Sehring (01/14/97 6:46 pm ET @Midlothian, VA) ucc wb2eqg

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "F r6fqHo!ht" <75121.100@CompuServe.COM>  
Subject: Rebuilding caps  
Message-ID: <970116203049\_75121.100\_IHV83-2@CompuServe.COM>

Gang, a mention was made re: rebuilding caps.

>(3) Anyone approach Frontier Electronics on a cap replacement  
>such as the 80-80-50-40 for the HW-16?  
<Yes, Everett Hoard will rebuild just about any cap and he does a very nice  
<job. Also, he guarantees his rebuilds unconditionally for a year...good  
<fellow. We have had him rebuild several caps, and have been entirely satisfied.

How can Frontier Electronics be contacted. Any phone number and address?

Raymond Cote  
1405 Dominis St #105  
Honolulu Hawaii 96822

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Bob Reynolds <breynold@sigg.com>  
Subject: Re: Recievers  
Message-ID: <97Jan16.133200cst.19645@firewall.sigg.com>

A question, I am hearing all kinds of praises on the R-390 and SP-600. In the past I was in a position where WE ran about 30-40 R-390's and the same number of SP-600's 24 hours a day, 7 days a week. The SP-600's were used for frequency searching while the R-390's were used only for "known" schedules. The R-390 was a real dog for searching, so much that the operators would not use it. What is the feeling of the group comparing these 2 receivers.

73, Red, K5VOL

breynold@sigg.com

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "Edward J. Zeranski" <ejz@nosc.mil>  
Subject: Re: Recievers  
Message-ID: <2.2.32.19970116203110.00cc89f4@marlin.nosc.mil>

WE ran about  
>30-40 R-390's and the same number of SP-600's 24 hours a  
>day, 7 days a week. The SP-600's were used for frequency  
>searching while the R-390's were used only for "known"  
>schedules. The R-390 was a real dog for searching, so much  
>that the operators would not use it. What is the feeling of the  
>group comparing these 2 receivers.  
>  
>73, Red, K5VOL  
>

Two receivers, both sensitive, stable, etc., but built for different purposes. The guys that scan or search with an R390A end up looking like Popeye. When I was in the service the '390s were used to copy traffic on known channels or intercept in a specific freq. area.

Ed Zeranski ejz@marlin.nosc.mil, work  
ezeran@cris.com home  
Wooden Boats, Tube Receivers, Rusty Old Trucks, The Good Stuff!

This is a private opinion or statement and is nobody's fault but mine. No person, employer, or govt. should try to take credit for it!



From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: jml@innercite.com (Jim Lockwood)  
Subject: Re: Recievers...  
Message-ID: <199701160157.RAA17500@spider.innercite.com>

At 17:36 1/15/97 -0600, Ronnie Hull wrote:

>

>that teh 2-B was possibly one of the best receivers  
>ever made.

The 2B is darned good, but I think this idea of it being one of the best has to have some kind of context for it to make sense.

Here's one:

If you look at the radio, count the tubes, check out its relative \*lack\* of mass and girth, kick the tires, and size up the aesthetics, you might conclude that it isn't going to do much. That is, the first impression just isn't overwhelming.

However, once you power it up, it becomes clear that it is an extremely competent performer that can hold its own against some very expensive contemporary radios. So, I'd classify it as a sleeper as much as anything. It doesn't give you the advance impression that it's worth a second look, but it turns out to be very, very nice afterall.

>

>

>What are your opinions fellows? What are you  
>favorite receivers and why? Why do you prefer  
>one over the other?

Hmmm....interesting question. OK, here's a stab at it. In decreasing order of preference, this is how I would rate several receivers I've either owned or had the pleasure of test driving:

Drake R4B - when I really, really want to pull the weak ones in and still use tubes to do it....

Drake 2B - lots of bang for the buck. not quite the equal of the R4B due to dial resolution.

halli SX-115 - absolutely beautiful SSB audio. quiet as a tomb when not tuned to a signal. if only it had passband tuning....

halli SX-100 - lots of bang for the buck. tuneable notch and selectable

sidebands. look for one that has the 1961 CQ magazine product detector mod. and check out that chrome panel inlay. does that scream out that it's a product of the '50s or what? don't bump the table it's on.

National NC-303 - surprising cold-start stability from a tunable HFO architecture. nice AM sound. needs fast attack/slow decay agc for ssb, tho.

Hammarlund HQ-110/170/180/etc - wonderful audio quality

halli SX-62 - addictive audio quality from push-pull output stage. be sure to get the R-42 or R-44 speaker.

I'm sure there are plenty of valid reasons to like other radios besides just these. However, in my limited experience, these have stood out from the crowd and have become my favorites.

73,

Jim - km6nk

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "William B. Ross" <billross@txdirect.net>  
Subject: Re: Recievers...  
Message-ID: <32DD95CE.37BB@txdirect.net>

Ronnie Hull wrote:

>  
> I noted in the Surplus Sales mess that they stated  
> that teh 2-B was possibly one of the best receivers  
> ever made. I've heard this before.  
> . . .  
> What are your opinions fellows? What are you  
> favorite receivers and why? Why do you prefer  
> one over the other?

By far, I believe the 75A4 is, dollar for dollar and pound for pound, the finest BA reciever ever produced. Although it has its problems, particularly with the noise generating 6BA7 mixers (converters to you real old old timers), it was the standard for stability and frequency

setability for many years. With mechanical filters, band pass tuning, and linear tuning PT0, it stood out over everything else manufacturers came up with. It was of a quality that never quite made it into the later S-Line (although the S-Line did not repeat the 6BA7 mistake).

After playing with BC348s, RMEs, Hallis, Nationals and, yes, even Drakes in those days, the 75A4 was truly "magic".

Bill Ross K5LLK

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: km1h@juno.com  
Subject: Re: Recievers...  
Message-ID: <19970115.215418.9887.24.km1h@juno.com>

Here is a "personal" preference list with a few comments. I will stick to the Post WW2 period and those that were widely used by hams. Not SWL or military oriented units.

.

Best AM/CW: HRO-60 followed by the NC-183D. I feel they had the edge over the pre 75A4 Collins except in stability.  
Best for many at moderate cost AM/CW: HQ129X and HQ140X.  
Best low cost SSB/CW: Drake 2B but it overloaded easy too. It (and the 1A, 2A) set the standards for the competition and helped bury some.  
Best big bucks SSB/CW: modified 75A4  
Best all around SSB/CW: Drake R4C with Sherwood and Satori mods..still in use by serious DXers.  
Best appearing in a ham shack: NC-303, lit up of course  
Worst in any category: most Hallicrafters  
Most overpriced: Any Collins S line; also most impractical for many hams because of the 200 KHz tuning range.  
Least appreciated: RME 45 thru 6900. The Hudson of ham radio.  
Most nostalgic: NC-240D or SX-28A  
Cutest: Davco DR30 but it was SS. A real orphan.

Other favs above and beyond previous categories:  
51J4; any Super Pro, SX-88, HRO-500 (SS) but a true BA, GPR-90.

With 700 list members there will probably be 700 variations! Thats why they invented strawberry ice cream.

73.....Carl KM1H

I am not a Hallicrafters hater; just never owned one I liked. From SX16, 17, 20R, 24, 25 ,28A, 71, 101A. Although working for National for almost 7 years I never liked most of their products either. The Collins S

Line was really an attempt to be everything to everyone but as a strictly ham product it was way overated.

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: vancleef@netcom.com (Henry van Cleef)  
Subject: Re: Recievers...  
Message-ID: <199701160708.AAA17742@netcom17.netcom.com>

As William B. Ross discourses

>

> Ronnie Hull wrote:

> >

>

> By far, I believe the 75A4 is, dollar for dollar and pound for pound,  
> the finest BA reciever ever produced. Although it has its problems,  
> particularly with the noise generating 6BA7 mixers (converters to you  
> real old old timers), it was the standard for stability and frequency  
> setability for many years. With mechanical filters, band pass tuning,  
> and linear tuning PT0, it stood out over everything else manufacturers  
> came up with. It was of a quality that never quite made it into the  
> later S-Line (although the S-Line did not repeat the 6BA7 mistake).

>

> After playing with BC348s, RMEs, Hallis, Nationals and, yes, even Drakes  
> in those days, the 75A4 was truly "magic".

>

Millen DFP 500---the "big" prototype set. About the same weight as  
the 75A4, but a little smaller, and (here's the match tossed at the  
bucket of gasoline) better looking. So far as "dollar for dollar,"  
you couldn't buy one because the manufacturing cost estimates put it  
well above the 75A4. Almost as expensive as a Tek 545 scope with CA.  
The DFP 200 was more on a par with the 75A4.

If you are going "dollar for dollar" and "pound for pound"  
comparisons, an RME-45 was lots cheaper (\$198.50 from Leo W0GFQ in  
'48) and about 30 lbs, if that. It may not "outperform" a  
75A-anything (and is a much earlier set than the A4), but it'll leave  
it breathing hard. Sort of like saying a 1937 Packard Twelve club  
coupe was a "better car" than a 120-C Packard Club coupe----and then  
noting that you are comparing a 6500 lb. 473 CID \$4000 automobile with  
a 3200 lb. 282 CID \$995 automobile.

And anyway, where are the R-390 and SP-600 fans? C'mon fancy radio  
touts, you gonna stand still for a 75A?

Hey Stan Griffiths, you ever stop to think what a "Tektronix  
540-radio" built like a 545A would have been for \$1725? Make anything  
Collins ever built look like it came from a lower east side New York

loft AA5 operation.

--

=====  
Hank van Cleef  
E-mail vancleef@netcom.com or vancleef@tmn.com  
=====

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: kilgore@dev.tivoli.com (Jeff Kilgore)  
Subject: Re: Recievers...  
Message-ID: <199701161440.IAA03251@wichita.tivoli.com>

>  
> I noted in the Surplus Sales mess that they stated  
> that teh 2-B was possibly one of the best receivers  
> ever made. I've heard this before.  
>  
snip  
>

I am very fond of my 2B, especially since I finally procured a 2BQ to accompany it. It offers very decent performance and I rather like the ergonomics. I also like its looks; it just seems to epitomize a certain era and design philosophy. I am also quite fond of my R4, but I do wish that the preselector tuning had a reduction drive like that on the 2B; it would make it a more pleasant radio to use.

My R-390A is another favorite of mine. The tuning isn't quite as smooth as some I have seen, but it is still quite usable. I tend to use the R-390A in situations where I only want to tune a relatively small segment of the spectrum, since it can be a real chore to go bandhopping. One of these days when I have time I am going to fix the AGC and see if I can smooth out the tuning a bit more.

For general SWBC listening, I usually prefer my TMC GPR-90. It's a pleasure to use, it looks very nice, and it sounds very nice.

For casual SSB operation, the KWM-2 is my preference. I was very lucky to find a very nice KWM-2 at a very decent price from fellow listmember Phil Mills, and this rig has given me many pleasurable hours of operating.

Most of my other radios fall in the area of fun to play with, and provide

some nice nostalgia. These are mostly Heathkits.

I confess to occasionally using my Kenwood TS-850, but while it is nice for certain things (digital modes, light-duty contesting, etc.), it just doesn't have the soul that the firebottle radios have. I think the last time I turned the 850 on must have been almost three months ago!

73,  
Jeff Kilgore, KC1MK

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: anders@autopsy.corp.sgi.com (Greg Anders)  
Subject: Re: Recievers...  
Message-ID: <9701160846.ZM26880@autopsy.corp.sgi.com>

I certainly cannot take issue with anything you said, in fact, your loyalty to the 2B made me a believer.... Heck, I'm using mine with my 100V right now. I think you hit the nail on the head with the context that this little box looks like it should have "underwhelming" performance cause it appears to be the equivalent of a \$100.00 Lafayette or Allied receiver. A real lion in sheep's clothing... So here are my two lists:

AM	SSB
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AR-88LF	R4C
HRO-50	75A4
HRO-7	2B
R4C	HQ170C
HQ-129X	SB301/310

--

Greg Anders

"One doesn't discover new lands without consenting to lose sight of the shore for a very long time."

Andre Gide

French Novelist

anders@autopsy.corp.sgi.com  
KG6YV

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Bob Roehrig <broehrig@admin.aurora.edu>  
Subject: Re: Recievers...  
Message-ID: <Pine.ULT.3.95.970116111324.22641B-100000@admin.aurora.edu>

Well, I am on my second 2-B and I always thought it was a fine receiver. It is a good CW/SSB performer, stable, and has decent bandspread/readout. Good points: Able to cover any range from 3.5 to 30 MC, small, lightweight, easy to use, pretty common tube lineup. Selectivity is good for the filtering method used, and I love the passband tuning. Not so good points: In a way it is ugly. I hate those cheap slide switches. Question: why didn't they combine the detector switching with the BFO on/off function. Why anyone would use the AM detector on CW/SSB is beyond me. 2 features I wish it had: noise limiter or blanker that worked in CW/SSB mode, and 160 meter coverage.

I also had an R4 which I am real sorry I got rid of. I liked that one even better than the 2-B.

Someone said "where are all the SP-600 owners"? Well, that would also be on my list of favorites, especially for being able to cover wide frequency ranges quickly, yet with reasonable dial calibration. The "bandspread" dial being directly coupled to the main tuning dial is a plus (unlike the SP-200's). It is a "hot", stable receiver, great for SWLing - it would not be my favorite on the crowded ham bands.

I must also mention the HRO. I have 2 of the older units. That PW dial is just great. As with the SP-600, a product detector, or sideband slicer makes it a much better receiver.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI  
CIS: Data / Telecom Aurora University, Aurora, IL  
630-844-4898 Fax 630-844-5530

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Richard E Robinson <rerobins@uncc.edu>  
Subject: Re: Recievers...  
Message-ID: <Pine.SOL.3.91.970116124550.7577A-100000@unccsun>

My favorite receivers: I still own 1, 2, and 3.

1. Drake 2B - a CW op's receiver. Only my Drake R8 comes close to it's selectivity, sensitivity and stability. (Drake can still make a mighty fine receiver).
2. Hallicrafters SX-28 - 85 lbs. of beautiful 1940s technology. It's a joy to tune, listen to and look at. Really brings out the beauty of old AM transmitters with the push-pull audio and the PM-23 speaker. There's nothing like hearing Hank Snow sing "Rumba Boogie" on WSM with the SX-28, with enough audio out of the 6K6s for my entire neighborhood to listen too.
3. EAC R-390A - quiet, sensitive, stable and probably the ultimate tube receiver. Plus, it was made here in North Carolina. I'm a little biased toward the Mars Hill folks.
4. Collins TCS-11 - my novice receiver in 1963, came from WBT radio, who used it to monitor Radio Moscow in the late '50s. Solid as a rock and with my Heathkit Q-multiplier hooked up, a fine CW receiver. I wish I still had it.
5. "Rocket Radio" - red and white plastic, aligator clip lead for ground, attached earphone, and little sliding rod on the inductor for tuning. I laid in bed many a night as a kid listening to WIST until I fell asleep. Saw one just like it at the Charlotte Hamfest several years ago, new in the box for \$100. No, I'm not that nostalgic.

#### Hall of Shame

Hallicrafters SX-101A - maybe I had a lemon. The Drake 2B eats it's lunch at 1/4 of the weight. I liked my SX-71 much better. Every switch in the '101A was flaky. 'Twas a grand day at the Shelby Hamfest in 1967 when I sold it. I hope no one on the list bought it.

73,

Rick kf4ar



From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: kb9iua@juno.com (Kevin L Anderson)  
Subject: replacement cap/cond. questions  
Message-ID: <19970115.215746.7671.10.kb9iua@juno.com>

Boatanchor Wisdom Folks:

I'm back after a year or so away, finally now with a home account,  
and recognize some the names posting in the last few days.  
Good feeling to be back.

Questions:

(1) anyone "kludge" the quad (80-80-50-40) electrolytic  
cap/condenser in a Heath HW-16? If so, how did you do it in the  
space etc. you have to work with. Anyone start with the Mallory  
FP type 40/40/20/20@450 that AES sells for \$36.00, then parallel  
some more to get the needed values? Other ideas? Ideally  
I'd replace one-to-one, but that is a specific cap, and I've tried  
several pulled from parts-HW-16s, and they were bad to.

(2) In the current QST is an article on caps where it suggests for  
electrolytics to stay at the previously voltage, and not go higher, as it  
seems the capacitance/voltage is too tied to the material used.  
Is so? Why? How else can I do with the limited values in voltages  
sold new-stock today?

(3) Anyone approach Frontier Electronics on a cap replacement  
such as the 80-80-50-40 for the HW-16?

Thanks. Cheers/73. Kevin, KB9IUA

\* \* \* \* \*

Kevin Anderson, KB9IUA, Rock Island IL USA

Home: kb9iua@juno.com or kla@helios.augustana.edu

work: anderson@ncrsun1.ncr.usace.army.mil

\* \* \* \* \*

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Walt Novinger <waltn@earthlink.net>  
Subject: Re: replacement cap/cond. questions  
Message-ID: <2.2.32.19970116184246.006ad9b4@mail.earthlink.net>

At 10:03 PM 1/15/97 -0600, you wrote:

>(2) In the current QST is an article on caps where it suggests for  
>electrolytics to stay at the previously voltage, and not go higher, as it  
>seems the capacitance/voltage is too tied to the material used.  
>Is so? Why? How else can I do with the limited values in voltages  
>sold new-stock today?

I' too, heard this when I was learning electronics in the 60's. Seems that the "folk wisdom" at the time was that too low a voltage wouldn't allow the plates in the cap to "form" properly. This may have been true then, But I have never had any problems in the past few years using higher-then-original voltage caps \_of modern manufacture\_ as replacements. Lower voltages, tho, are another story :=).

>

>(3) Anyone approach Frontier Electronics on a cap replacement

>such as the 80-80-50-40 for the HW-16?

Yes, Everett Hoard will rebuild just about any cap and he does a very nice job. Also, he guarantees his rebuilds unconditionally for a year...good fellow. We have had him rebuild several caps, and have been entirely satisfied.

Walt

```
=====
Walt Novinger                      Real Radios Keep You Warm At Night!
Collector of hollowstate communications receivers and test equipment
waltn@earthlink.net                wnovinger@shl.com
```

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: dfrancis@access.usa.net (Dexter Francis)  
Subject: Retro Radios at CES...prices, &tc.  
Message-ID: <v01520d00af0429650332@[207.0.57.74]>

I happened to be at CES (that's the Consumer Electronics Show) last week and was fascinated to see that Crosley is putting out a small line (about 5 models) of reproduction radios. These were not those awful pseudo-tubed monstrosities that you see in the Sharper Image catalog, but legitimate reproductions of 30's to 50's vintage Crosley tube radios. I asked the sales guy how they picked the models to clone, and he indicated that it was mostly based on popularity. His reference seemed to be a few pages from one of the antique radio buyer's guides.

The list price for these retro-memorabilia was around \$200 each. (I say again NO tubes inside.)

BTW - Sansui had several pieces of old audio gear on display to highlight their return to the tube hi-fi business. On display was a high-end 30 x 30 amplifier loaded with Svetlana tubes...

No, I don't intend to defend Tucker or SSoN for their prices, BUT until someone comes out with brand new radios (again) the market place is driven by supply and demand. Perhaps the demand has simply risen to the point where the big players are going back into the market....

Who knows.

-df

P.S. If anyone is in the market for an SX-62, drop me a note.

\* CWest Tube Sales \*  
"Have Tubes, Will Haggle"  
P.O. Box 22443 SLC, UT 84122  
(801) 363-TUBE voice/fax  
e-mail: tubes@usa.net

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: w2ec@VNET.IBM.COM  
Subject: Retro Radios at CES...prices, &tc.  
Message-ID: <199701161944.NAA02531@uro.theporch.com>

>I happened to be at CES (that's the Consumer Electronics Show) last week  
>and was fascinated to see that Crosley is putting out a small line (about 5  
>models) of reproduction radios. These were not those awful pseudo-tubed  
>monstrosities that you see in the Sharper Image catalog, but legitimate  
>reproductions of 30's to 50's vintage Crosley tube radios. I asked the

>The list price for these retro-memorabilia was around \$200 each. (I say  
>again NO tubes inside.)

-df,

I'm confused. In one sentence you say they are not pseudo-tubed, but legitimate reproductions of ..... tube radios.

Then you say "I say again NO tubes inside".

Which is it, are there tubes or not, and where did you say "NO tubes" the first time? Did I only get part of the post?

Ray

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Ho4bart@aol.com  
Subject: S S of N, i risk one more comment  
Message-ID: <970116053807\_1176780425@emout11.mail.aol.com>

at risk of being taken to the flogging post, i want to add  
these thots:

my take on SS o' N is that they only really have one lucrative  
input stream -- the Collins connection. there's little or probably  
no electronics mfg in nebraska, so the local economy could  
only turn the occasional test equip box or junky junk or odds  
n' ends of military pieces from Offut AFB in Bellevue, NE.  
unless Collins loves them, SSN had to get this stuff by high  
bid; this and the tenuousness of this supply stream makes them  
worried, and i do mean worried, about getting the absolute last  
penny out of their stuff. this is only my impression, but  
impressions are sometimes even accurate.

as exasperating as i found SSN and as uninspiring, omaha;  
there was one beacon of anchor interest there for me: that was  
Keystone Bibliopolist, the manuals bizness run by John Draus.  
as it turned out, his home-business was only abt 3 miles from  
where i lived, & in the course of doing bizness with him, i visited  
him at his home. he was not a collector, but he had a very good  
knowledge of the equipment. his pricing, while not giveaway, was  
always fair market. he had some kind of connection to SS of N,  
which i do not understand, but i somehow surmise that they helped  
him find an initial trove of manuals in florida, or turned the manuals  
business over to him. ( i wonder if that trove was the former  
Communications Electronics Co. or Coral Communications (?)  
seen in some 1960s surplus article references ). he had plans  
to work up a new catalog but his earthly work was cut short by a  
totally unexpected heart attack in late '95. he was truly a fine  
gentleman.  
hue miller

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Jonathan Butler <j-butler@dircon.co.uk>  
Subject: S-20R manual  
Message-ID: <1.5.4.16.19970116225818.195720d0@popmail.dircon.co.uk>

Crikey you chaps are keen - never thought would have so much interest  
anyway have had to decide on recipient and have notified him direct.  
Sorry to those I cannot help - wish I had 17 original copies!  
Jonathan Butler G4JOW  
1928 Sunbeam 20.9hp 1950 MG TD.Collins KWS-1/75A4 32V3 51J4

KWM-1 KWM-380 30-L1. Junk everywhere.  
Butler & Co. Solicitors. 01952 608060.(Shropshire)...

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: don merz <71333.144@CompuServe.COM>  
Subject: Sally 'Scope Meets Swingin' Needle  
Message-ID: <970116164954\_71333.144\_DHB89-6@CompuServe.COM>

Hey, the last time I checked this was a hobby that I am doing because it is fun! For me, 'scopes are more fun. I find reasons to use the 'scope even when I don't need to. Nothing against a swingin' needle, but meters are pretty workaday devices. A trace has entertainment value!

Happy probing!  
73, Don

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: vancleef@netcom.com (Henry van Cleef)  
Subject: Scope differential inputs to vertical amp  
Message-ID: <199701161058.DAA07322@netcom2.netcom.com>

As Jim Garland W8ZR discourses

>  
> At 8:47 PM -0400 1/15/97, Nina West wrote:  
> >I understand what a differential amplifier scope plugin does (channel 1  
> >minus channel 2 equals signal without common mode noise), but is there a  
> >practical use of this capability for the BA hobbyist? Can I cheat and  
> >float the ground input of the scope instead? (might be dangerous)  
> >  
> >Fred Powell  
> >c/o  
> >ninaw@u.washington.edu  
>

I didn't see the original to this, so am copying somebody else's response and deleting it to answer.

I'll assume we are talking a classic Tek scope as described in Stan Griffiths' book.

\*\*\*Can\*\*\* you cheat and float the ground input of the scope? Yes, you can, very easily. Just take the ground pin off the power cord connector (a #4 nut, and too many come off by themselves). Is it wise

to do so? Unless you know exactly what you are doing, and spend some time bonding the frame of that scope to some other protective ground, the answer is not "no," it is "hell no!"

Let's look at a practical example, because there are a bunch of problems to consider. One Tek scope as the UUT (Unit Under Test). Another Tek scope being used to test the UUT. The circuit of interest is the horizontal amplifier. For those not familiar with the layout of 530-40 series horizontal amplifiers, it's a DC coupled setup, single-ended at the sweep generator (0-150 volts referenced to ground) which goes through conversion to double-ended in a circuit with a big feedback loop, and a few more stages to end up on the CRT horizontal plates. To give rough numbers (these vary substantially depending on the scope and the CRT used), the horizontal deflection plates are centered somewhere around 180 volts (spot in the screen center), and require around 50 volts/centimeter for deflection. Spot at left edge (sweep ready to trigger) puts the left deflection plate at around 315 volts above ground; the right plate at around 55 volts.

So:----you float the scope, hook the probe ground strap to the right plate (yeah, you just measured 55 volts, so that's "not too bad"), and the probe to the left plate. Yes, you're using a 10X probe, so you position the trace to the top of those four (four, count'em, 4) big vertical centimeters, set the vertical sensitivity to 10 volts/CM on your CA, and trigger the UUT scope to run a single sweep at 1 CM/Second to see what happens.

What happens of course is that the trace on the display scope walks down a centimeter every two seconds and vanishes for the last two seconds (4 cm---ugh!), if everything is working write. As a free feature, the test scope frame (and remember that in a Tek scope the "frame" is kilograms of aluminum---multiple, not just pounds) ambles right on up to 315 volts above ground. Thats a lotta volts, and while Tek power transformers won't blow up if you pull the core 190 volts above AC "hot" and 315 above "neutral", you've got two big scopes sitting less than a probe length away from each other with many square feet of sheet metal, every square millimeter of which is insulated by blue Tek paint, a few angstroms of lacquer, or nothing----315 volts apart.

Now, what's behind that 315 volts? One scope is connected to ground through the green (you do buy #16 cords for Tek scopes don't you?) The other scope uses the 500 volt supply to drive the CRT plates, and that supply is quite capable of furnishing an amp without blowing the scope fuse long enough to toast a large Tom Cat.. Oh, sure, there are a couple of Graham Cracker resistors in the loop---something like 10-12K effective impedance, offhand (naw, I ain't gonna get out a schematic and get three figure calculations on this one).

What's the difference between getting across 315 volts with a source impedance of 315 ohms and 315 volts with 10K impedance. Remember, that in the probe ground path, "impedance" is that diddly little ground strap, which is maybe an ohm (so I lied about the 10K,, its 10,001 ohms). You wanna try an experiment on this to see if you can tell the difference? It's a free country. However, please let us know where the Memorial Service will be.

That's DC. Now, let's put full war emergency power on that horizontal amplifier. Easy to do, just crank the sweep up to the maximum speed and turn on the 5X magnifier. On a lowly 530 series, that's 20 nsec/cm for an effective length of 100 CM. Of course, you'll bottom out ("ground out") on the supplies long before you get 100 CM of sweep voltage. You've got your display scope case hooked to one side of the CRT, and it's going to be jumping up and down from near ground to near 500 volts with every sweep excursion. The sweep generator will trip after a microsecond and reset in about half that time, and the hold-off in the trigger will prevent repetition for something like a whole microsecond, so you're getting one of those sweep ramps around every two microseconds. That period is 500 Khz. That may be the lowest frequency in there. A non-symmetrical sawtooth wave, with some holdoff at a DC level, has an interesting Fourier series of frequencies, if you want to view it in that context. Sort of like looking over a bunch of Frenchman for a "typical Frenchman"----they come all sizes and shapes, and there are a lot of them. Indeed, I'll the bet the Fourier series out of this makes the stuff that comes out of a rock and roll group's amplifiers look like pipe organ flute noises (pure sine waves). Don't post this on rec.audio.tubes, or they'll all want one. I wonder how good an antenna a Tek 545 case makes. Probably radiates plenty, and has shapes, nooks, and crannies that assure that every erg you get into that case goes out in the air as wave motion and particles, all with plenty of electric and magnetic oomph. Probably enough to wipe out every cheap AM radio, FM radio, and low-band TV on the block, and zero out several cordless phone conversations. Probably won't light any nearby light bulbs, but a few might consider it. The scope case might radiate better if it were mounted on a tower, but I don't think too many of us want to pack a 60 lb. scope up a tower just to find out----and make sure you have the case (and yourself, while handling it) isolated from the tower---that's likely to be a very good ground.

Now, let's consider the isolation of "hot" and "cold" between the scopes. I'll bet if you looked you could find something like a microfarad or two somewhere in that big chain. What do you think the impedance of a microfarad at 500 Khz. and random an assorted higher frequencies is? Is it something like a few feet of #0 cable, or more on a par with #4/0. Get something like that somewhere in the path and

try driving it with 500 volts, and things are going to get exciting. Where does the current come from? Try "Tek power supplies," and even if they can pump an amp, they can't pump a microfarad at 500 KHz. and 500 volts. That's power like 813's use, and for 813's, you use a bunch of mercury vapor rectifiers, and not 816's and 866 juniors, either.

The circuit you are testing in this example is the signal on a pair of CRT plates, and that is supposed to be a balanced signal. You've got your nice 10X probe on there. Gives plenty of isolation, no significant circuit loading, and all the good things that one uses 10X probes to get, right. Yeah, right---on the side the probe is hooked to. You floated ground on the other side, and it's got all kinds of good things hooked to it----the display scope case, its power supplies and references to ground and neutral, and the UUT scope's power supplies through whatever paths REALLY exist (all the ones you missed when you looked at the schematics), and so forth and so on. Effectively, you might as well connect a 1000 mF cap from that deflection plate to chassis, and simplify the circuit. What those deflection plates see is certainly not going to be anything resembling a balanced signal, because you've shorted one side.

The response I copied said something like "hell no" to the idea, and all I've done is to go on and on to say the same thing. This is the type of problem that a Tek Field Engineer encountered at customer sites in the sixties and seventies (and was expected to answer with an explanation when the customer was "sure" the FE didn't know what he was talking about. I'm sure that if I were playing EE prof. at some Toob U. and had some zealous grad students hanging around, I could turn them loose and they'd find a lot more, all calculated to four figures.

Virtually all of the Tek plugins for 530-40-50 and for 560-series that had two input amplifiers also had provision for differential input of some sort or another. The 82 has similar provision to the CA and 1A2. Notable exception is the original 53/54C, which was supplanted by the CA, which added the "added algebraically" mode to the original C. The actual capabilities to handle common mode voltages, reject common mode AC from the display, and voltage limits vary. That's one reason for having Stan's book on scopes---there are something like fifty or sixty plugins, some of them quite specialized, and several very useful in general purpose work, and trying to sort out which is best for which applications is like sorting out Collins serial numbers and configurations.

Most of the time, I use one of the oldest, a G. I prefer the simple to the exotic when the simple will serve, and the G and K plug-ins are both the simplest and most useful of the early letter series. The CA



has the capability, but is harder to set up, and has less precision.

When making differential measurements, you usually will want to use a pair of X10 probes and set the two inputs to the same deflection factor. Actual deflection at 1V CM with X10 probes is 10V/CM differential, exactly the same as you get with single ended input, non-differential. No calculations needed. To get good rejection, first connect both probes to the calibrator, and set the deflection attenuators to the value you will use. Set the calibrator to give the full vertical range of deflection (6CM except on earlier 540 series, 580 series), then flip to the differential input mode and adjust either the pot provided (differential balance), second input gain (if a tweak is provided) or one of the variable gain pots to null out the common mode signal. Don't expect miracles. 40 db. of common mode rejection is half a millimeter on a 6CM display, and you can see that. That's 1% on a 3% instrument.

Keep in mind that the linearity of vertical amplifier inputs on most plug-ins is good ONLY in the region providing on-screen display. If you try to put 20 volts DC on a G, with a 2V/CM deflection factor, then null out that 20 volts with the other input, results are undefined, because you are moving the 6AK5 grid too far. Use AC coupling, and measure any DC levels separately, if you need to measure them. The Z plug-in will null out DC, and is made to do this, but it is something of a specialty plug-in, and not the first one to look for, if you are looking for general purpose plug-ins.

I generally use the 6AK5 input plugins, rather than the nuvistor or fet input units, for work like this. 6AK5's are common, cheap, and good tubes. The nuvistor and fet input amps have wall-to-wall protective circuits because they will damage easily, and you are strictly limited on general purpose plugins to signal levels that will not go offscreen when displayed on a single channel. In short, don't put any plugin, DC coupled, across the filter choke in an 80 power supply to look at ripple across the choke. Use AC coupling to block the DC.

A few tips on getting maximum utility out of your fine old Tek scope.

1. Know your scope. There are lots of knobs, and an army of binding posts, on the front panel. Get smart about what they do, what they are used for. The day may come when you need to do some testing, and need a signal that is right on the front panel of the scope, or an input capability that is available by connecting a probe to one of those panel jacks that "nobody ever uses."
2. Watch out for "cockpit error" problems. If you can't get a trace, or have other strange symptoms, shut the scope off, look at, and touch

every single control on it, making sure that the control is set properly and not preventing a display trace. I once trouble-shot a 533A for over an hour with "no sweep," only to find that the big and very obvious Single Sweep switch was set to Single Sweep, not to Normal Sweep.

Another very common cockpit error is "no sweep on the delaying sweep." Often, you're getting plenty of sweep, and ignoring the reality that switching to delaying sweep lowers the intensity, to give some headroom for the "intensified" mode. Crank up the intensity a bit after checking that the sweep is set to free-run. Also, watch out for inadvertently turning on the magnifier on the units having a 5X magnifier switch concentric with the sweep selector.

3. Respect the scope for what it is not. Don't expect to get three figure accuracy with oscilloscope measurements. A scope is literally a jack of all trades and master of none, particularly when it comes to quantitative data. The real value of an oscilloscope is its ability to give you qualitative information----draw pictures of what's goin on inside a circuit.

Note that the number 3% is used for Tek scopes. In actuality, the circuits are stable to better than 1% in most cases. However, 1% is the observer error for a skilled observer. An unskilled observer will read to no better than 5%, and sometimes worse, particularly on older scopes with external graticules. Build your skill as an observer. Use as much of the display as possible for the quantities you measure, make sure that your viewing position is a constant, and that the scope is calibrated for your viewing position. Then try making repeated measurements of constants, changing what you are measuring and scope settings so that you measure different things and rotate back to repeat the measurement.

4. Don't feel you absolutely have to have a 1A4 4-trace plug-in, and if you have one, don't feel that it is a universal "one-fits-all" unit. The same is true for 1A1, 1A2, and maybe even the ubiquitous CA.

1A4, 1A1, and 1A2 are, granted, nice plug-ins, and you need one to get the 50 Mhz. capability of the 547/6/4 scopes. They also tend to be quite expensive, and have plenty of calibration tweaks.

Contrary to popular opinion, K, G, and CA will work very well in any of the 530-40-50 series. A simple K will do 90% of your measurement work. It's also dirt simple, and a very good plug-in to have available for test and calibration of the scope. Get an assortment of plug-ins, and use them as appropriate.

Fortunately, the most useful plug-ins for use with ham radio equipment are the plug-ins that sold as volume leaders with these scopes, so are easy to find. Get a handfull and get them working. You'll use them.

5. On calibration, do yourself a favor. Watch the tweaks that tend to drift, and leave the others alone. The preset stability (on the front panel on later scopes), and the vertical and horizontal gain adjustments are the ones that are likely to need periodic adjustment. Don't touch the -150 volt adjustment unless you are prepared to retweak every tweak in the scope. Most of the scopes I see---and I see a lot of junk---have the -150 right where it was set at the factory.

Every so often I get E-mail on the Tek wannabes. These are not Tek scopes. They look like Tek scopes. They were purchased by the US govt in the early sixties, and they are supposedly compatible with Tek plugins and vice versa.

If it was made by Tek, it says, very clearly "Tektronix, Inc., Portland Ore. U.S.A." on the front panel, and has the Tek logo on it (A CRT side view, a scope sine wave display in front of it, and the letters "TEKTRONIX" in front of that. They are always present, and they are placed on panels in positions and form factors that can't be covered up by single nameplates or property tags. The wannabes I have seen have screwed-on nameplates, often with no manufacturer's name. If it doesn't say Tektronix on it very clearly, it isn't Tek. Period. This includes the 945 "mil spec" 545 and 647, both of which were intended for US gov't markets (Uncle bought off-the-shelf commercial units when they bought Tek, but they also bought a ton of wannabes).

So far as buying and fixing up the wannabes, you're on your own. Most of them limped along for a few years, then died horrible deaths. I have a Hickock 545 wannabe here for parts that cooked its HV power transformer. Another tipoff that it's a wannabe is that they use MIL-T-27B/C hermetic can transformers. Tek used open frame construction (usually, a big cast aluminum cover on the power transformer with the Tek logo on it). During the years I worked in Field Training, which was in the same building as the Tek transformer shop, I visited that shop several times, and am fairly sure that they had no no hermetic cans or headers, nor the equipment for assembling them. Oddly enough, they are loaded with top quality components, and almost always have low time on them, so make excellent parts sources.

Please don't send Stan or me E-mail on getting a dead wannabe working. Both of us have puttered with them just enough to detest them, and have little help to offer. Only Tektronix could build a Tek 545 scope, and what we've seen of the wannabe stuff proves it. Same goes for the plug-ins. If it's genuine Tek, it says so, and if it doesn't

say so, it's a wannabe.

Enough on scopes! Use a differential plug-in for your measurements, and keep your Tek scope grounded at all times.

--

=====  
Hank van Cleef  
E-mail vancleef@netcom.com or vancleef@tmn.com  
=====

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Richard Hager <rhager@millcomm.com>  
Subject: Re: Scopes vs. VTVMs, etc  
Message-ID: <32DE72CD.684C@millcomm.com>

Hank raised an interesting point about using meters in preference to scopes.

I admit to being a nut about scopes, I've been collecting and restoring them for about 20 yrs now. It never occurred to me to use a meter for troubleshooting. To me, meters are for 'measuring' and scopes are for 'seeing what's happening'.

Perhaps that's one reason why I've appreciated his writings so much. I'm fascinated to follow along with his procedures and logic-tree as he figures something out. And equally fascinated at how much he accomplishes with very basic instrumentation. I'd always expected him to have this fantastic 'lab' with every piece of exotic test gear known to man. He is truly impressive with what he accomplishes with a bridge and meter.

Funny enough, but a recent experience hits directly on this scope/meter issue. About 3 months ago I acquired an older Tek 564B storage scope that I was going to restore and use with a pair of sampling plugins.

It had trouble in the power supply (transistorized portion), and for some reason that day I decided not to even power on the bench scope, but just troubleshoot it with a meter. Don't ask me why I picked that day and that job to be different!

The long and short is that I spent hours trying to find out why this beast wasn't working right. None of the output voltages were right, even though the parts checked OK, plus it would blow a driver xsistor if you

left it on more than 10 seconds at a time. What a pain.

Finally after an entire night working on it, I struck me that two of the hundreds of meter readings, while very close to the values given on the schematic, didn't make sense. I noticed that two of the readings were on either side of a diode, but were 3-4 volts apart!! I -knew- the diode was good, having checked it a couple times that evening.

This really set me back. The readings I was getting were 'impossible', ergo, the meter was giving me bad info, right? Suddenly it dawned on me to flip on the scope and look at those points.

10 vpp of ripple all over everything! The meter (a \$900 Fluke lab DMM) was obviously giving me the 'average' of the levels present, including the distorted AC riding on the DC. I flipped the meter to AC volts and sure enough, it said there was plenty there. God, if only I'd -started- with the scope, I would've saved myself literally hours of wasted effort.

The moral: A scope is the best instrument in the world for troubleshooting. A meter is best for measuring and calibrating. The scope, while not as accurate as a meter, gives you -all- the info -at once-.

Oh, by the way, I found two bad (open) electrolytics in the 564B. In two and half decades of electronics work, I've -never- had an open electrolytic in anything before, let alone a Tek scope. And a week later, in repairing a 466 portable scope that a previous tech had butchered in an unsuccessful repair attempt, I found yet -another- pair of open electrolytics in the PS. Weird....

It's possible that if I'd been accustomed to using meters only, rather than scopes, I might have noticed earlier that the V's on each side of the diode were more than .6v apart. Perhaps I was inappropriately thinking 'scope' while using the meter, that is, I was probing for info, rather than using the meter to 'measure'. I don't know.

Maybe the 'moral' given above isn't 100% correct, but I do rely on the scope as my number one test bench tool. My 'main' unit is a 500mhz 4-bay Tek, and it runs about 12hrs/day for both design and troubleshooting work. I have another 4-bay frame next to it, and a 2445 150mhz portable on top of those two. Each is setup for a different type of work.

A final word about scopes. There was some commentary about hams not liking scopes due to 'overbuying' and getting things like dual-timebases that weren't very useful.

I use delayed-sweep (dual timebase) every single day and I couldn't live without it. I wouldn't own a scope without it, and my advice to

scope-shoppers for what it's worth, is to get dual timebases and to buy the best possible scope you can afford. It is sure to become a primary tool for you, and you can -never- have 'too much' scope.

Richard

--

Richard Hager

+ Ah-ha! Design Group, Inc. -  
+ Precision CNC Technology, since 1991 -  
+ 612-641-1797, Fax: 612-641-8681 -  
+ "I just like to make things" So... -  
+ ...please call Ah-ha! directly for CNC info -  
+ <http://www.millcomm.com/~ahha> email: [ahha@millcomm.com](mailto:ahha@millcomm.com) -

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997

From: Morris Odell <[morriso@vifp.monash.edu.au](mailto:morriso@vifp.monash.edu.au)>

Subject: Re: Scopes vs. VTVMs, etc

Message-ID: <32DEA392.706D@vifp.monash.edu.au>

Hi Richard and fellow anchorites,

<story about rippling power supply snipped>

> This really set me back. The readings I was getting were 'impossible',  
> ergo, the meter was giving me bad info, right? Suddenly it dawned on me  
> to flip on the scope and look at those points.  
>  
> 10 vpp of ripple all over everything! The meter (a \$900 Fluke lab DMM)  
> was obviously giving me the 'average' of the levels present, including  
> the distorted AC riding on the DC. I flipped the meter to AC volts and  
> sure enough, it said there was plenty there. God, if only I'd -started-  
> with the scope, I would've saved myself literally hours of wasted effort.

I must say I had a very similar experience recently with the HP 606B signal generator.

I usually use a meter first to check all voltages and make sure power supplies are within range when checking out a "new" BA. In this case they seemed to be OK but there were problems with the crystal calibrator in the 606. I spent a lot of time poking around measuring voltages that didn't seem right until I switched on the scope and found the squegging in the power supply caused by a faulty filter cap.

The real question is not really whether a scope is "better" than a VTVM and we've all seen very good arguments either way in this thread. I

personally love using scopes but I also like to exercise the ol' necktop computer as well (another non-BA item, sorry) and there's nothing as satisfying as thinking your way through a problem based on the evidence provided by sensible measurements.

My own shack is probably biased a bit towards scopes (I have 7 of them!) which is why I'm contemplating adding a VTVM or 2.

> A final word about scopes. There was some commentary about hams not  
> liking scopes due to 'overbuying' and getting things like dual-timebases  
> that weren't very useful.  
>  
> I use delayed-sweep (dual timebase) every single day and I couldn't live  
> without it. I wouldn't own a scope without it, and my advice to  
> scope-shoppers for what it's worth, is to get dual timebases and to buy  
> the best possible scope you can afford. It is sure to become a primary  
> tool for you, and you can -never- have 'too much' scope.

I'll second that. It's definitely worth the effort of finding a scope with a delay facility and learning how to use it properly. The first of the battery of scopes I reach for is usually the Tek 535A. I've got a couple of delaying scopes but I'm still looking for a Tek 545A or B (the classic BA dual timebase workhorse).

73

Morris

-----  
Morris Odell                                      Victorian Institute of Forensic Medicine  
Forensic Physician                                      57-83 Kavanagh St, Southbank 3006  
morriso@vifp.monash.edu.au                                      Victoria,  
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Web page: <http://www.vifp.monash.edu.au/CFM/staff/mo.html>  
-----

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Richard Hager <rhager@millcomm.com>  
Subject: Re: Scopes vs. VTVMs, etc  
Message-ID: <32DEA0A9.4C7E@millcomm.com>

Morris Odell wrote:

> I personally love using scopes but I also like to exercise the ol' necktop  
> computer as well (another non-BA item, sorry)

Now Morris, some necktop computers hold an excellent vacuum level...

> and there's nothing as  
> satisfying as thinking your way through a problem based on the evidence  
> provided by sensible measurements.

So true, so true. I think -mastering- a field is the greatest satisfaction in life. The first time you -understand- something as elegant as switching regulators for instance, or double balanced mixers, you just walk around grinning all day.

Although frankly, in designing motor drivers, there's usually PLENTY of necktop work even using a scope. I -don't- need the extra challenge of doing it with only a VOM ! hee hee...

R.

--

Richard Hager

+ Ah-ha! Design Group, Inc. -  
+ Precision CNC Technology, since 1991 -  
+ 612-641-1797, Fax: 612-641-8681 -  
+ "I just like to make things" So... -  
+ ...please call Ah-ha! directly for CNC info -  
+ <http://www.millcomm.com/~ahha> email: [ahha@millcomm.com](mailto:ahha@millcomm.com) -

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Merv Schweigert <k9fd@htc.net>  
Subject: Schematic needed  
Message-ID: <9701161604.AA23343@ns.htc.net>

Does any one happen to have a 1963 ARRL Handbook that they could copy the P00 Key keyer article. Thanks 73 Merv K9FD

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "David M. Nance" <dmnance@roanoke.infi.net>  
Subject: Signal Generator Suggestions?  
Message-ID: <32DF145D.1919@roanoke.infi.net>

I think it's time to get get to work on some of these B/A's I've recently (and not so recently) acquired. However, I'm in need of a good signal generator which will go down to 50-60 kc so I can align my HQ-180 and any future Hallicrafters units that might find their way into my shack. I also have an R-392 and a 75A4 that needs going through.



I'm going to be hitting the hamfests starting this weekend so I need some suggestions from the group. The surplus URM-25D looks like a good candidate to me. Anybody have any comments or suggestions.

73

David - WB4SSE

"I try to think but nothing happens."

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997

From: Richard Hager <rhager@millcomm.com>

Subject: Re: Silver-Zinc batteries?

Message-ID: <32DE7ADF.213B@millcomm.com>

Hello,

I'd expected Dr. Barry to respond at length, but since I haven't seen a msg from him, I'll tell you what I know about these beauties:

- a) Silver-Zinc is a battery system capable of being recharged.
- b) It has the highest energy density (watt/hrs per pound) of any practical battery system, except for some of the newer lithium systems. Between 125-200 whrs/lb, vs. about 35 for a good car battery. This low weight per energy unit is the sole reason it's used in aerospace applications.
- c) It has almost none of the safety problems of the lithium systems.
- d) It is still very dangerous. Even 'safe' batteries are dangerous. And -any- item with high energy density is dangerous.
- e) The huge drawback of silver-zinc is the very short cycle life. The zinc grids do not re-plate evenly during recharge. They tend to grow 'dendrites', little spikes which pierce the separators and short the cells. A typical cell is good for only 25-100 cycles.
- f) The other drawback of course is the initial materials cost. Silver costs a lot more than lead!
- g) While potassium hydroxide can certainly be used to charge these batteries, be aware that the electrolyte made for these cells generally contains trace quantities of other compounds which significantly help the dendrite problem (leveling agents, in plating parlance). Without these agents, you may get only 10-15 cycles before the cell dies. With the agents, you should get 25-100 cycles before the battery drops to 50% of

original capacity.

h) I don't know the current market value for recyclable silver, but a fair fraction of the cell weight is silver, so if you have a lot of them, you might want to cash them in and buy lithium rechargables and a charger.

i) The silver cells are sensitive to poor charging methods. You need to make sure your charger never exceeds a certain voltage under any circumstances, and it should also follow a specific current/time curve, unique to the cell.

j) These cells are commercially available. Most are made by a company in the UK, famous, but I can't remember the name right now. Be prepared to pay and pay and pay though!

k) Silver cells can emit hydrogen and oxygen during operation and charging. This is explosive. Be sure ventilation is good.

Hope this all helps. Short story is: cash 'em in and buy something more robust, like very high energy nickel-hydrides or lithium rechargeables.

Richard.

--

Richard Hager

+ Ah-ha! Design Group, Inc. -  
+ Precision CNC Technology, since 1991 -  
+ 612-641-1797, Fax: 612-641-8681 -  
+ "I just like to make things" So... -  
+ ...please call Ah-ha! directly for CNC info -  
+ <http://www.millcomm.com/~ahha> email: [ahha@millcomm.com](mailto:ahha@millcomm.com) -

From [boatanchors@theporch.com](mailto:boatanchors@theporch.com) Thu Jan 16 00:29:00 1997  
From: [gcr2@po.CWRU.Edu](mailto:gcr2@po.CWRU.Edu) (George C. Rybicki)  
Subject: SP600 AGC ?  
Message-ID: <199701160252.VAA11176@piglet.INS.CWRU.Edu>

I am still trying to solve what I believe is a slow attack problem with the AGC on my SP600 AGC. Problem is distortion on strong AM signals especially voice peaks. Problem goes away if you reduce the RF gain enough. Yes all the tubular caps are replaced, tried substituting tubes, any other suggestions on what specific faults or areas to look at in detail? Anyone else have this problem before? Thanks George.

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Al Klase <alklase@prolog.net>  
Subject: Re: SP600 AGC ?  
Message-ID: <199701161449.IAA23690@uro.theporch.com>

At 08:57 PM 1/15/97 -0600, George C. Rybicki wrote:  
>I am still trying to solve what I believe is a slow attack problem  
>with the AGC on my SP600 AGC. Problem is distortion on strong AM  
>signals especially voice peaks. Problem goes away if you reduce the  
>RF gain enough. Yes all the tubular caps are replaced, tried  
>substituting tubes, any other suggestions on what specific  
>faults or areas to look at in detail? Anyone else have this problem  
>before? Thanks George.  
>  
Just a couple of suggestions:

Check the AVC delay voltage, V14 pin 5. This should be about 22  
volts with a high impedance voltmeter.

Disconnect the AVC bus from all DC paths to ground by disconnecting  
diode-load resistor R61 (1 Meg) and R97 (3.3 Megs). The AVC bus should now  
show infinite resistance (greater than 20 megs) to ground. If not find the  
leak.

Hope this helps,  
Al

Al Klase - N3FRQ  
alklase@prolog.net  
Flemington, NJ

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Ho4bart@aol.com  
Subject: Re: Spark on 500 kcs  
Message-ID: <970116023014\_1958819549@emout09.mail.aol.com>

In a message dated 97-01-15 13:07:33 EST, you write:

<< was the last time that spark was used for  
communication on 500kcs? >>

this absolutely tops anything i've read. did the shore ops act astounded at  
what they were hearing? quenched gap spark? hue miller  
what rec were you using?

i have some paper from alaska steam that indicates they changed out their ww1 receivers for sw-3's right after pearl harbor. i assume they did this for fear of "receiver radiation". hue miller

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Richard A. George" <wa6jox@rain.org>  
Subject: surplus sales bashing  
Message-ID: <Pine.SUN.3.95.970115170804.15781A-100000@coyote.rain.org>

Come on guys! Have you ever ran a bussiness?. I ran a surplus store for 2 years in so. cal., and i can tell you for a fact that hams are the cheapest skinflints in the world. i can say this having been a ham for 27 years. Stop and think what it costs now adays to print and mail a catalouge, or advertise or pay rent or taxes or licenses or employess or ..... come on guys if you don't like the prices leave the guy alone, or open your own store.

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Jack Harper <jharper@bs2000.com>  
Subject: Re: surplus sales bashing  
Message-ID: <199701161514.IAA01611@lynx.csn.net>

At 19:18 1/15/97 -0600, you wrote:

>Come on guys! Have you ever ran a bussiness?. I ran a surplus store for 2  
>years in so. cal., and i can tell you for a fact that hams are the  
>cheapest skinflints in the world. i can say this having been a ham for 27  
>years. Stop and think what it costs now adays to print and mail a  
>catalouge, or advertise or pay rent or taxes or licenses or employess or  
>..... come on guys if you don't like the prices leave the guy  
>alone, or open your own store.

>  
>  
>

FWIW, I run my own business (sometimes, I think it runs me -- from 0500 to usually 1900 or so 6 1/2 days/wk (end of sob story)), and, I must say, I agree completely...

To survive in the free marketplace is difficult -- but, very rewarding in every sense (not always monetarily...).

The market will tell them if they are out of line -- if their prices are too high then they will either drop them for less margin (and possibly go out of business due to lack of profits) or they will have no sales (and definitely



From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: roecker.greg@ist.mds.lmco.com  
Subject: Surplus Sales of Nebraska  
Message-ID: <Chameleon.853438739.greg@roeckerpc.ist.mds.lmco.com>

"I have never written on this subject before, but feel  
compelled to write at this time about what recently happened to  
me" . . .

I went out and looked at the prices . . . yeah, the hard to  
find stuff is priced VERY HIGH . . . . don't see many KWS-1's  
in the flea markets these days . . . but a B&W 5100 for \$175 is  
reasonable for a solid BA transmitter sold by a commercial  
business. My 5100B was in the \$150 category from a private  
source.

As an additional data point, they DO have the hard to find  
parts. I suspect that is what drives their prices up on some  
items . . . .

73,

Greg / N40SJ

-----  
Greg Roecker  
E-mail: roecker.greg@ist.mds.lmco.com  
Voice: 770.698.5226  
Fax: 770.698.5220  
From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: paul Veltman <veltman@netcom.com>  
Subject: Re: Surplus Sales of Nebraska  
Message-ID: <Pine.3.89.9701161541.A25838-0100000@netcom17>

> I went out and looked at the prices . . . yeah, the hard to  
> find stuff is priced VERY HIGH . . . . don't see many KWS-1's

At the last Livermore swap, there was a "Fair" condition KWM-1 for just  
under \$2,000. And it just sat there.

73

Paul WA6OKQ

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997

From: carl yaffey <cyaffey@sprynet.com>  
Subject: SX-62 power problem solved  
Message-ID: <2.2.32.19970116180715.00a7b9d8@m1.sprynet.com>

Yep, bad 5U4. The one I \*\*\*JUST GOT FROM AES\*\*\* was bad as well as the original one in the radio. After all these years, fixing TVs and radios, you'd think I would NOT always trust a "new" tube. Shame on me. After diconnecting everything but the xfmr and the tube socket, it was still blowing fuses. It HAD to be the tube or the xfmr. But, the xfmr was putting out the right voltages with the tube out of the socket. But, how could it be the tube when it was a \*\*NEW\*\* one! Hi Hi. So, I raided my Heath AT-1 for a KNOWN good 5U4 and, presto, the radio came alive!  
TNX \*\*MUCH\*\* to all who replied. 73, Carl K8NU

-----  
Carl Yaffey K8NU (ex-W4EZB) cyaffey@sprynet.com 614 268 6353 Columbus OH  
Banjo player for One Riot One Ranger, independent software developer.

```
  /~~\\
  |#===||=====|***|
  \__//
```

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "Walter L. Marshall" <wmarshall@CapAccess.org>  
Subject: Re: SX-62 power problem solved  
Message-ID: <Pine.SUN.3.91-FP.970116150540.3005A-100000@cap1.capaccess.org>

Anchorists,  
Yea, I have better luck with "pulls" then I do with AES stock. For me it's always the \$2 tubes that are defective. But when you need it, it's just a valuable as any other tube.  
Walter

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Richard Hager <rhager@millcomm.com>  
Subject: Re: Tek Scope Question(s)  
Message-ID: <32DE5900.7BFC@millcomm.com>

Several have answered this person and suggested he get Stan's book, but I've seen no mention of how he would do so.

To the original questioner: This is Stan's email addr:

w7ni@teleport.com (Stan Griffiths)

If you don't get a response the first time, email again and put BUY YOUR BOOK in the subject. Stan sometimes gets flooded with junk email and doesn't always see each message. He's a great guy and it's a good book.

For component level troubleshooting, you will still need the Tek service manual. They are excellent manuals.

--

Richard Hager

+ Ah-ha! Design Group, Inc. -  
+ Precision CNC Technology, since 1991 -  
+ 612-641-1797, Fax: 612-641-8681 -  
+ "I just like to make things" So... -  
+ ...please call Ah-ha! directly for CNC info -  
+ <http://www.millcomm.com/~ahha> email: [ahha@millcomm.com](mailto:ahha@millcomm.com) -

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: SP600@aol.com  
Subject: temp comp capacitor  
Message-ID: <970115230135\_273057680@emout18.mail.aol.com>

Hello,

I am confused about the older temperature comp capacitors. My receivers that I have use N220, N330, N470, N750, N1500 types. After looking thru the many catalogs I just can't find them. With the newer technology is there a more universal replacement such as the XF7 type. If the older types are still available who has them. Beside I don't need to buy bulk lots either.

Thanks,

Charlie N9SOR

//////////HAMMARLUND COLLECTOR\\\\\\\\\\\\\\\\\\

<http://home.aol.com/sp600>

HAMMARLUND home page

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Tom LeMense <LEMENST@fhsmtp.fh.trw.com>  
Subject: Temp comp capacitor -Reply  
Message-ID: <s2ddf0d0.031@fhsmtp.fh.trw.com>



re: the lack of availability of temp-comp capacitors

Charlie,

Unfortunately, most retail-type electronic outfits don't stock temp-comp caps because of the all-or-nothing nature of stocking things like this.

These caps are still made today by most manufacturers of ceramic disks (eg; MuRata, AVX, etc..) You will probably have to go through a real distributor to obtain them, and they will cost more than you would expect, but at least nowadays you can credit card order with many large electronic distributors (check on the web for phone numbers).

There are many other dielectrics too, such as X7R, Y5V, etc. These are NOT temp comp caps! Instead, they are very high K (dielectric constant) types that manage to cram the maximum amount of capacitance into the smallest size possible, (usually) at the expense of tolerance and stability. They make fine bypass caps for digital logic IC's, but are typically very poor substitutes for any sort of RF work.

hope this helps... If you are stuck on formulating capacitor part numbers, send me e-mail and perhaps I can help you out.

-tom

-----

Thomas LeMense \* Sr. Project Engineer  
TRW Automotive Electronics Group  
Farmington Hills, Michigan facility  
810.615.7822 \* 810.478.7241 fax  
internet: lemenst@fhsmtp.fh.trw.com

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Deane D McIntyre" <dmcintyr@acs.ucalgary.ca>  
Subject: Re: the "little thief"  
Message-ID: <9701170030.ZZ325338@ds1.acs.ucalgary.ca>

Gang:

With the HP400D now in good shape due to advice from Hank and others, now it is time to move on to the other HP box I have, a 411A RF millivoltmeter. This unit is nice and clean with original probe. Date codes on tubes indicate it was made in '62.

This unit sort of works, however the needle drifts all over the place on the lower ranges. I can zero it, OK for a few seconds and the needle will rapidly start drifting. Also has a rapid oscillation (in step with the chopper it seems, which is operating properly (rotates and all four bulbs lit).

It had one of the dreaded black caps with the colour code bands, which was of course replaced with a new polyester cap. Voltage drop across the 0B2's 106 volts, OK. Changed the 6CB6 and 12AX7....no joy. Any ideas? Don't have a spare 6AU8 but a 6CX8 might be a good sub.. time to look in the toob stash.

73, Deane D McIntyre VE6BP0  
Deane@deane.bio.ucalgary.ca  
<http://deane.bio.ucalgary.ca>  
BAfest page <http://deane.bio.ucalgary.ca/BAfest>

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: "Paul Bock" <pauboc@smtplink.pulse.com>  
Subject: To Fr. Bruce Bowes, KB2TRF.....  
Message-ID: <9700168534.AA853456110@smtplink.pulse.com>

.....with a callsign suffix like that, you are \*DEFINITELY\* in the right group! Good luck with the DX-40!

73,

Paul, K4MSG

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Walter L. Marshall" <wmarshall@CapAccess.org>  
Subject: Transformer testing  
Message-ID: <Pine.SUN.3.91-FP.970115233118.10049D-100000@cap1.capaccess.org>

Dear Anchorites,

Just thinking out loud you see. I have a tool called an armature growler. It can tell you if a motor or generator winding is open by the way it makes a feeler blade (held over the winding) vibrate.

I've never heard of one for a power transformer but, why not?

Yours,  
Walter Marshall

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Rich Arland <qrpri@postoffice.worldnet.att.net>  
Subject: Tubes are alive and well in text books  
Message-ID: <19970116222641.AAA27120@LOCALNAME>

Gang:

Today I received a teachers copy of Robert L. Shrader's "Electronic Communicatoins" text book (6th ed, c:1991 reprinted in 1996). This was THE text book in my first two years in college, along with the ARRL handbook.

The 6th edition has tube theory right in along side the sand-state stuff. It is very refreshing, with the trend toward all sand-state theory in post secondary electronics courses, to see someone still remembers that tubes are alive and well in the commercial industry. God bless Bob Shrader!

New subject: Injuneers

My comment regarding 3/4 of the engineers I have known and worked with: Most can recognize a train two out of three times!

Col. Frank Gingrich, my old boss at 2147 Comm Gp, RAF Mildenhall, had a pet saying: "Time to shoot the engineer and get on with the project"! Nuff said.

73 rich K7SZ

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: paul Veltman <veltman@netcom.com>  
Subject: Re: Tubes are alive and well in text books  
Message-ID: <Pine.3.89.9701161537.A25838-01000000@netcom17>

On Thu, 16 Jan 1997, Rich Arland wrote:

> Gang:

>

> Today I received a teachers copy of Robert L. Shrader's "Electronic  
> Communicatoins" text book (6th ed, c:1991 reprinted in 1996). This was THE  
> text book in my first two years in college, along with the ARRL handbook.

>

01' Bob Shrader, W6BNB. I still have a copy of his 'black book' around

and refer to it from time to time. That was our high school radio shop textbook. He was one of the regulars at the San Leandro Radio Club in the 1960s, and he often became the extemporaneous entertainment. All of us went home a little smarter because of Bob. Haven't talked to him in a Month of Sundays, but I'm glad that the book is still kicking around. It's an excellent work.

73

Paul WA6OKQ

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Rich Arland <qrprich@postoffice.worldnet.att.net>  
Subject: Re: Tubes are alive and well in text books  
Message-ID: <19970117013106.AAA10527@LOCALNAME>

At 12:03 AM 1/17/97 +0000, you wrote:

>

>On Thu, 16 Jan 1997, Rich Arland wrote:

>

>> Gang:

>>

>> Today I received a teachers copy of Robert L. Shrader's "Electronic  
>> Communicatoins" text book (6th ed, c:1991 reprinted in 1996). This was THE  
>> text book in my first two years in college, along with the ARRL handbook.  
>>

>01' Bob Shrader, W6BNB. I still have a copy of his 'black book' around  
>and refer to it from time to time. That was our high school radio shop  
>textbook. He was one of the regulars at the San Leandro Radio Club in  
>the 1960s, and he often became the extemporaneous entertainment. All of  
>us went home a little smarter because of Bob. Haven't talked to him in a  
>Month of Sundays, but I'm glad that the book is still kicking around.  
>It's an excellent work.

>

>73

>

>Paul WA6OKQ

Bob just had an article on proper ways to send CW and how to adjust a straight key, swidswiper and a bug in the Jan issue of 73 magazine. Good article.

I gotta tell 'ya, that book is a very good read, especially the 1st or 2nd edition (which I had but lost during moves in the USAF).

If you should ever see Bob, tell him his book helped me get my 1st phone and

led me into a very interesting career in communications.

73 rich K7SZ

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Tom Norris <badger@telalink.net>  
Subject: Re: Tubes are alive and well in text books  
Message-ID: <3.0.32.19970116204246.006b1350@telalink.net>

>>On Thu, 16 Jan 1997, Rich Arland wrote:  
>Bob just had an article on proper ways to send CW and how to adjust a  
>straight key, swidswiper and a bug in the Jan issue of 73 magazine. Good  
>article.  
>If you should ever see Bob, tell him his book helped me get my 1st phone and  
>led me into a very interesting career in communications.

Same here. And it is a very decent reference that I use often. I have the 4th  
edition here (1980) Got my First Phone the year AFTER it was made general  
phone, right about the time it became a psuedo-worthless piece of paper.  
At least so I thought. It got me a job as a broadcast engineer, and was an  
employer requirement for the tech job I have had for the past 7 years, so  
maybe it is not so worthless afterall....

\*\*\*\*\*

Tom Norris KA4RKT  
badger@telalink.net Nashville, Tennessee, USA

-----  
Eagles may soar free and proud, but weasels  
never get sucked into jet engines.

\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: Jeffrey Herman <jherman@hawaii.edu>  
Subject: Re: Tubes are alive and well in text books  
Message-ID: <Pine.GS0.3.93.970116164510.7093G-100000@uhunix3>

Schrader's book had to be one of the few that grouped amateur and  
commercial radio side-by-side. I've got the early 80s edition.  
Jeff KH2PZ

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997

From: "Don Buska" <d.buska@aaiate.com>  
Subject: Tubes Wanted: 6DL5 & 6DA6  
Message-ID: <97Jan16.105437cst.15362-1@gateway.aaiate.com>

I've trained the XYL well. A couple of months back, while my wife was driving my daughter home from school, she came across some electronic equipment waiting for trash pickup. Well she brought it home; Bless her heart!

What she found:  
Bogen Amplifier  
Homebuilt HV Power Supply (about a 500V job, nicely done).  
German made entertainment type SW receiver.

Now for the needs:

Whom ever pitched this stuff thought the tubes were worth more than the equipment and thus all tubes are removed. I want to get the last radio working first. It is a Graetz Fantasia Model 822E. Boy is this baby big. It's about 3' across and a little over a foot tall. It is a real work of art and in very good physical condition. It has a neat little loop antenna inside that is connected to a front panel dial via an elaborate system of string and pulleys. You turn a front dial and the loop will rotate, cool stuff. Anyhow, I have a rather extensive tube stock, but it rather thin in the area of European tubes.

So I need four (4) EL-95's (6DL5) and two (2) EF89's (6DA6). I don't want to invest in AES or other tubes at this time, but I'm interested in what the BA list people may have. Willing to pay cash or work possible trades from my current stock. What do you need?

Anyone out there familiar with this Graetz model or the company. This radio covers AM/FM and MW bands.

73  
Don N900

```
*****
**
** Don Buska N900 (EN62) Principal Engineer **
** d.buska@aaiate.com Advantest America Inc. **
** Kenosha, Wisconsin Buffalo Grove, IL **
** (414)654-0072 (847)821-3393 **
** fax (847)634-2872 **
**
** ARRL-LM AWA AMI CCA QCWA CSVHFS NTMS **
**
```

\*\* Wants: Transmitters by Thordarson, Stancor, UTC and \*\*  
\*\* other transformer companies. \*\*  
\*\* Receiver: National NC-101XA w/speaker \*\*  
\*\* Magazines: 73 Mag's from 1960/61/62 \*\*  
\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Nina West <ninaw@u.washington.edu>  
Subject: Uses for differential amplifier scope plugin  
Message-ID: <Pine.A41.3.95b.970115162711.44954A-100000@dante20.u.washington.edu>

I understand what a differential amplifier scope plugin does (channel 1 minus channel 2 equals signal without common mode noise), but is there a practical use of this capability for the BA hobbyist? Can I cheat and float the ground input of the scope instead? (might be dangerous)

Fred Powell  
c/o  
ninaw@u.washington.edu

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: Jim Garland W8ZR <4CX250B@miavx1.acs.muohio.edu>  
Subject: Re: Uses for differential amplifier scope plugin  
Message-ID: <v03007802af0337e397f2@[134.53.65.12]>

At 8:47 PM -0400 1/15/97, Nina West wrote:  
>I understand what a differential amplifier scope plugin does (channel 1  
>minus channel 2 equals signal without common mode noise), but is there a  
>practical use of this capability for the BA hobbyist? Can I cheat and  
>float the ground input of the scope instead? (might be dangerous)  
>  
>Fred Powell  
>c/o  
>ninaw@u.washington.edu

Hi Fred,

Don't even THINK about floating the ground of the scope. It's a quick way to blow fuses (if you're lucky), destroy some good equipment (if you're slightly less lucky), or end up six feet under (if you're not lucky at all.)

And yes, there is definitely use for the differential input modes, since it lets you measure the difference in potential (AC or DC) between any two points in a circuit, without worrying about where the ground reference is. For example, I used the differential input on my scope, recently, to measure the current drawn by a receiver. I unplugged the fuse from the fuseholder and jumpered a 1 ohm resistor across the fuse terminals. Using the differential input of the scope (Channel A - Channel B) I measured the voltage drop across the resistor, which is proportional to the current. The same trick can be used to measure the voltage drop across plate resistors, or any resistors which don't have one side tied to ground. If you didn't have a differential input, you would have to measure each voltage point separately with respect to ground and subtract the difference. This can be done pretty easily with DC, but with AC or RF it gets pretty tricky because you lose the phase information in the signal.

73,

Jim W8ZR

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: John Shriver <jas@shiva.com>  
Subject: Re: Uses for differential amplifier scope plugin  
Message-ID: <199701161459.JAA03578@shiva-dev.shiva.com>

Well, the maximum DC and common mode voltages that these diff-amp plugins can take are often rather close to the voltages in a BA. That can be a bummer. But, you should never cheat and float the scope chassis hot! Death is so final...

The ones with a voltage reference, like the Tektronix W and 3A7, are really useful for looking at power supplies. Normally, if you want to look at a power supply with any sort of sensitivity, you gotta go AC coupled. But, with the W, you just set the reference voltage to match the power supply (modulo the input attenuator drop), and then you can look at the stability of the power supply. So, wondering whether that power supply to the drifty VFO is a problem? Go at it with the W, and see everything. (This presumes that the W is working right, and isn't drifty itself. My 3A7 has the "drifts.")

I suppose that there might also be some way to use a diff-amp to look at balance in a balanced whatever, like a balanced modulator?

Certainly, you can look at balance in your push-pull audio output stage. Minimize that second harmonic distortion.



Also, note that the diff-amp plugins also just happen to be the most sensitive ones. Yes, in some cases that comes at a serious penalty in bandwidth. But there are ones that offer the scopes full bandwidth at quite high sensitivity. (The most sensitive ones, however, are very low bandwidth.)

From boatanchors@theporch.com Thu Jan 16 16:42:20 1997  
From: Paul Bernhardt <bern@ppdu.nrl.navy.mil>  
Subject: Wanted Hallicrafters S-36 manual  
Message-ID: <Pine.A32.3.91.970116165229.32352B-100000@ppdu.nrl.navy.mil>

Gang,

I have an S-36A manual but I need an S-36 manual to tune up my Hallicrafters. I will be happy to trade a good copy of the S-36A manual for a copy of the S-36 manual.  
Paul Bernhardt, KF4FOR

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: vancleef@netcom.com (Henry van Cleef)  
Subject: Re: Wanted Hallicrafters S-36 manual  
Message-ID: <199701170214.TAA27664@netcom11.netcom.com>

As Paul Bernhardt discourses

>

> Gang,

> I have an S-36A manual but I need an S-36 manual to tune up my  
> Hallicrafters. I will be happy to trade a good copy of the S-36A manual  
> for a copy of the S-36 manual.

>

I had an S-36A for a while, have looked over an S-27 (and manual), and swapped enough notes with people to suggest that the S-36A manual you have is close enough to guide you on the plain 36. Most of the differences seem to be mechanical, plus use of something other than 6SL7 as the audio driver.

The sensitivity specs for the 36A apply to all three sets. 70 microvolts on the mixer grid at IF frequency (5250 Kc) for half watt audio, as I recall, 2 microvolts on 10 meters, 10 microvolts at 135 mc. for 50 mw audio output. This is at full gain, narrow IF setting, AM.

Changes I know about:

1. Discriminator transformer should have load resistors across it. Hallicrafters used 15K, I recommend 12-13. If you have one load

resistor visible outside, the other one is installed inside.

2. Change the deemphasis RC network on the discriminator output to 75 microseconds. Original is 113. Smaller cap recommended.

3. If the first IF has a gain degenerator wired into broad-narrow switch, disable it with a piece of bus wire on the switch. If installed, front switch wafer will have more wires than center or rear.

Check the postage stamp micas and resistors in the audio (board on side of chassis under audio section). Check the power resistors on the board in front of it, particularly the 220 ohm 6V6 cathode bias resistor.

If local oscillator wimps out (mine did this on band 2) replace the grid leak with a new carbon film, replace the 955. Inside of the RF/LO/mixer cage MUST be clean.

Ball bearing balls in the tuning clockwork mechanism are .093 (3/16). Buy 100 from a local bearing shop or Small Parts (get the fine-finished bearing balls). You will have to take the RF cage off to dismount the clockwork (splendid opportunity to clean it up)---not too difficult. Make sure you have the stop collar on that clockwork input shaft centered so that the stop cam and lever have good clearance on the last "pass" turn and engage positively on the "stop" turn.

Don't expect stellar performance on commercial FM or aircraft bands. The design is 1940 "state of the art," and the set is pretty sleepy on the third band.

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=====  
Hank van Cleef

E-mail [vancleef@netcom.com](mailto:vancleef@netcom.com) or [vancleef@tmn.com](mailto:vancleef@tmn.com)  
=====

From [boatanchors@theporch.com](mailto:boatanchors@theporch.com) Thu Jan 16 09:10:04 1997  
From: "Freeberg, Scott (STP)" <[qc01870@stp03.guidant.com](mailto:qc01870@stp03.guidant.com)>  
Subject: Wanted Ranger or Valiant Transmitter  
Message-ID: <199701161433.IAA23334@uro.theporch.com>

Wanted: Johnson Viking Ranger or Viking Valiant transmitter. Prefer good condition and fully functional. This will be used regularly with my NC-173 receiver.

Thanks. Scott WA9WFA, St. Paul Mn

Work: 612-582-4057 Home: 612-653-2054  
Email: scott.freeberg@guidant.com

From boatanchors@theporch.com Thu Jan 16 09:10:04 1997  
From: Ronnie Hull <larebel@ms1.nwla.com>  
Subject: WTB F455B-60  
Message-ID: <1.5.4.16.19970116070553.08672934@ms1.nwla.com>

I would like to acquire this filter for the 75A3 I have coming. Anyone have one to part with? Price?

Ronnie

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: w4bld@juno.com (Robert B. Kerby)  
Subject: WTB Gonset Converters  
Message-ID: <19970116.121531.5063.7.W4BLD@juno.com>

Hi Gang - Anyone out there have any of these critters. I need parts or units in better condition than what I have. Any type "ok". Thanks, Bob  
NOTE: Someone posted two in a list the other night and I thought I replied, but I can't find the message in my "sent" list.  
Robert B. Kerby -I collect Gonset, Elmac, Lysco, and Morrow-  
Post Office Box 991 (UPS ADDRESS: 231 Rosser Avenue)  
Waynesboro, VA 22980 (540) 942-4356 w4bld@juno.com  
Nets I Frequent: DX-60 @ 1400 Sun. on 7290; Wed. and Sat. nights at 2000 on 3865;  
and the AM Swap Net at 1830 on 3885 on Thursday.

From boatanchors@theporch.com Thu Jan 16 00:29:00 1997  
From: "Walter L. Marshall" <wmarshall@CapAccess.org>  
Subject: WTB manual Tek 545  
Message-ID: <Pine.SUN.3.91-FP.970115203044.21012A-1000000@cap1.capaccess.org>

Hey Girls and Guys,

I'm looking for a manual for a Tektronics 545 scope. My delayed sweep ain't working. Have 545B manual that I can trade with some cash or will give 545B manual to someone

who \*needs\* it if I can't trade it. \$2.00 to cover shipping please.

Trying out a computer someone gave me today. How's the modulation? Audio, audio, test, test, test.

Audioly yours,  
The Woodchuck  
Walter Marshall

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Gary F. Franklin" <103273.1070@CompuServe.COM>  
Subject: WTB: 4:1 Reduction Knob / 75A-4  
Message-ID: <970116233042\_103273.1070\_IHH70-2@CompuServe.COM>

I am looking for a 4:1 reduction knob and gear assembly for my 75A-4.....  
Please E-Mail or call.....

Thanks  
Gary K8BKB

E-Mail: 103273,1070@compuserve.com

616-685-5792

From boatanchors@theporch.com Thu Jan 16 20:57:38 1997  
From: "Gary F. Franklin" <103273.1070@CompuServe.COM>  
Subject: WTB: 75A-4  
Message-ID: <970116232757\_103273.1070\_IHH70-1@CompuServe.COM>

A friend of mine is looking for a 75A-4.... If you have one to sell please give him a call evenings....

Jeff W8XQ  
616-381-4133

Thanks  
Gary K8BKB

From boatanchors@theporch.com Thu Jan 16 13:40:37 1997  
From: Hans Jense <jense@eos.arc.nasa.gov>  
Subject: WTB: Manual for BC-639 receiver  
Message-ID: <199701161921.LAA14882@eos.arc.nasa.gov>

Gang,

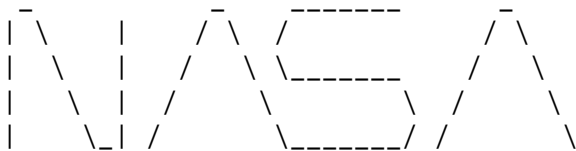
some of you may recall my recent query about my newly acquired BC-1421 VHF AM receiver. According to some listmembers this is a slightly modified version of the BC-639. As I have been unable to locate a MC-1421 manual I'm now looking for one for the BC-639. Would anyone happen to have one that is surplus to his/her needs? I'd prefer an original. If nobody has one, I'm going to order a copy from Mike Tannenbaum, but I thought I'd try this first.

Thanks for your attention,

-- Hans

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=====
Dr. G. J. Jense      | Command & Control and Simulation Division
Senior Scientist     | TNO Physics and Electronics Laboratory
Virtual Environments | The Hague, The Netherlands
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Currently on leave at:



Human and Systems Technology Branch  
NASA Ames Research Center  
Code AFH, Mail Stop 262-2  
Moffett Field, CA 94035-1000

Phone: (415) 604-1877  
Fax: (415) 604-3729  
Email: jense@eos.arc.nasa.gov

```
=====
From: boatanchors@theporch.com Thu Jan 16 13:40:37 1997
From: ARONGV@aol.com
Subject: WTB: Matchbox
Message-ID: <970116123659_202349747@emout16.mail.aol.com>
```

Hi Gang:

Christmas came and went and still no Johnson Invader 2000. But now I'm planning a trip to pick one up. You know, "Will not ship."  
Talk about a boat anchor, the power supply alone practically calls for a

hoist to get it off the ground!

Now, I'm looking for something I can tuck under my arm and walk away!

Seriously looking for a Johnson 275 watt Matchbox. Not fussy about condition, even it looks like it fell down the basement steps.

If it works and has the meter and sensor, contact me at my E-mail address and I'll help you clear another spot on your shelves.

Also, have a new set of Svetlana 4CX400A tubes, ceramic sockets & caps. Never out of box or fired up. Don't know what they're worth, so if interested, shoot me an E-mail bid.

De Ron/Wo0IZ    Kansas City, KS  
ARONGV@aol.com    (913)268-5973

From boatanchors@theporch.com    Thu Jan 16 20:57:38 1997  
From: "Gary E. Norman" <genorman@ix.netcom.com>  
Subject: WTD: Schematic for Hallicrafters TW-1000  
Message-ID: <199701162354.PAA28373@dfw-ix5.ix.netcom.com>

Anybody have a schematic for a Hallicrafters TW-1000 that they could copy for me? I am trying to repair one for a friend. Happy to reimburse copying & postage costs.

Gary Norman, W1PG (ex-AB1I)  
genorman@ix.netcom.com